DECEMBER 21, 1946

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Railway Age

Founded in 1856

A Great Forward Step in Railroading

RAILWAY EXPRESS AGENCY SPECIFIES TIMKEN ROLLER BEARINGS FOR 500 NEW EXPRESS REFRIGERATOR CARS.

In announcing the ordering of these cars from American Car and Foundry Company, the Railway Express Agency stated in part:

> "The new cars are equipped with roller bearings, the trucks and brakes are full passenger car standard, which will permit placing them in the fastest streamlined passenger trains attaining speeds of 100 mph . . . Timken Roller Bearings will reduce the starting friction, locomotive fuel consumption and delays caused by journal maintenance."

The TIMKEN "QUAD" BEARING application will be used on these 500 cars. This type of application not only is used in new cars, but because it fits into existing narrow truck frame pedestal openings, it makes possible the conversion of existing friction bearing cars with pedestal type trucks to Timken Roller Bearings.

Timken "Quad" Bearing Application.

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

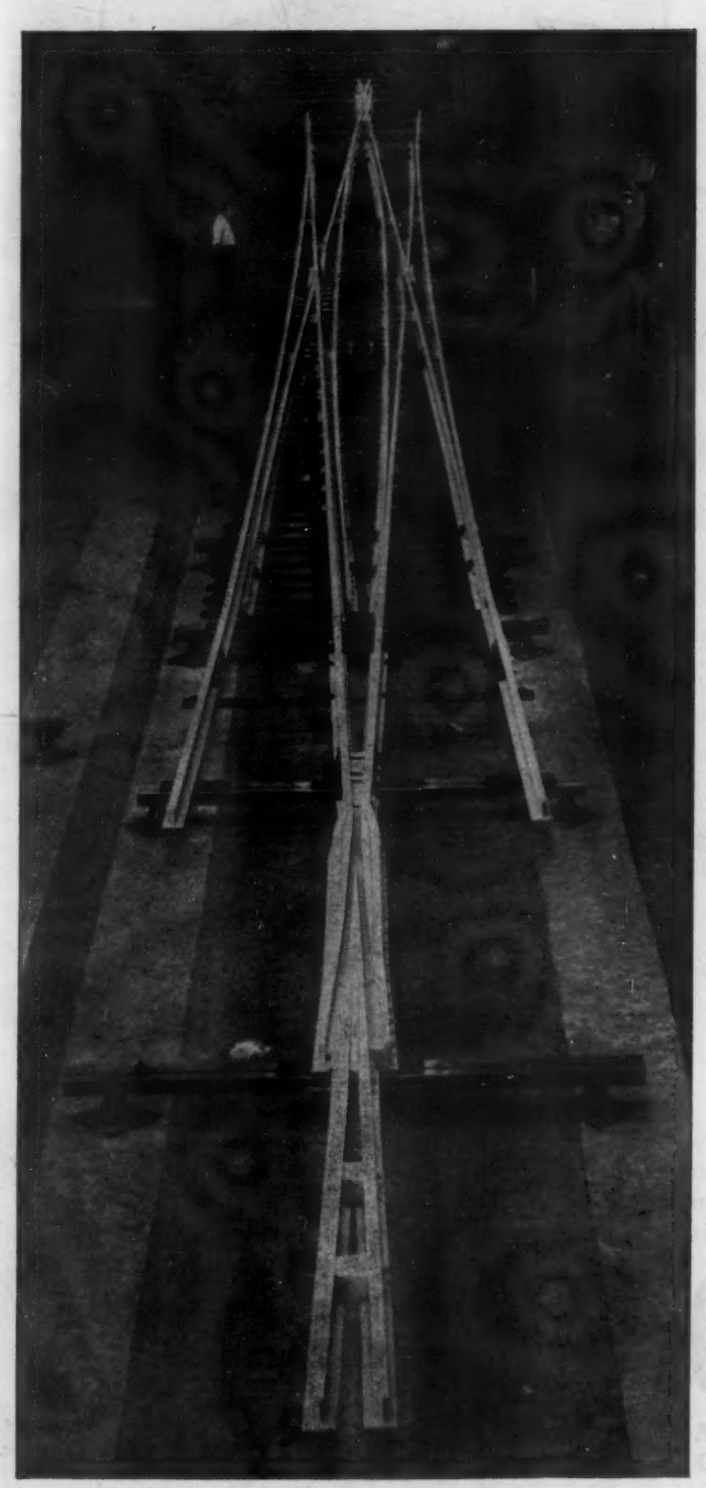
RAILWAY ROLLER BEARINGS

THE TIMKEN ROLLER BEARING COMPANY, CANTON 6, OHIO

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 50 cents each. Vol. 121, No. 25.

SPECIAL TRACKWORK

by Bethlehem



No. 20 Double-Slip Crossing by Bethlehem

The high speeds and heavy loads of modern traffic often require special items of track equipment that must be built to customer specifications. Bethlehem receives many orders like that, for we are especially well equipped to handle this "tailor-made" trackwork and have long specialized in it. Many of the largest special-work layouts in use today bear the Bethlehem trademark.

Working closely with railroad men, our engineers have helped develop some highly-successful innovations for safe, high-speed track. So the question "Where can we get it built?" is easily answered. Bethlehem has the men, the experience, and the modern shop facilities to give you what you are looking for.

And of course, in addition to the special jobs, we make a complete range of standard items—devices that you will find in main-line and yard track all over the country. Get in touch with us whenever your problem concerns new track and the maintenance or rebuilding of old.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast
Bethlehem products are sold by
Bethlehem Pacific Coast Steel Corporation

BETHLEHEM STEEL

WIDELY-USED BETHLEHEM TRACK PRODUCTS

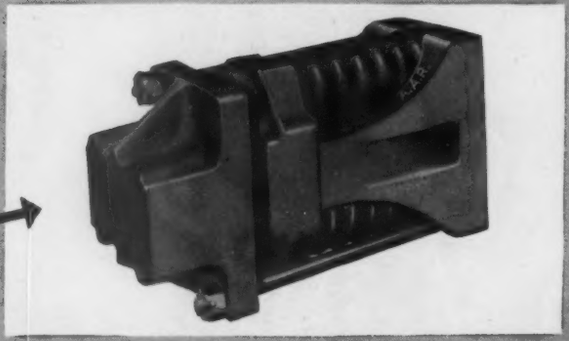
Bolts and nuts . . . Crossings . . . Frog plates . . . Frogs . . . Gage rods . . . Guard rails . . . Joint bars . . . Rail braces . . . Rails Spikes . . . Switches . . . Switch heaters . . . Switch stands Tie plates

protection

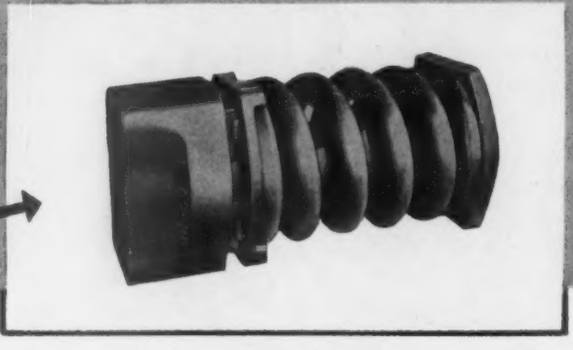
FOR CARS AND LADINGS

K-4 DRAFT GEAR
FOR PASSENGER CAR SERVICE
(Certified)

M-17-A DRAFT GEAR
FOR FREIGHT CAR SERVICE
(Certified)



M-50-B DRAFT GEAR
FOR FREIGHT CAR SERVICE
(Certified)



• For freight or passenger service, *National* Draft Gears provide maximum protection for cars and ladings and increased comfort for passengers and crews. Their sturdiness and maintenance of capacity can be depended upon for long service.

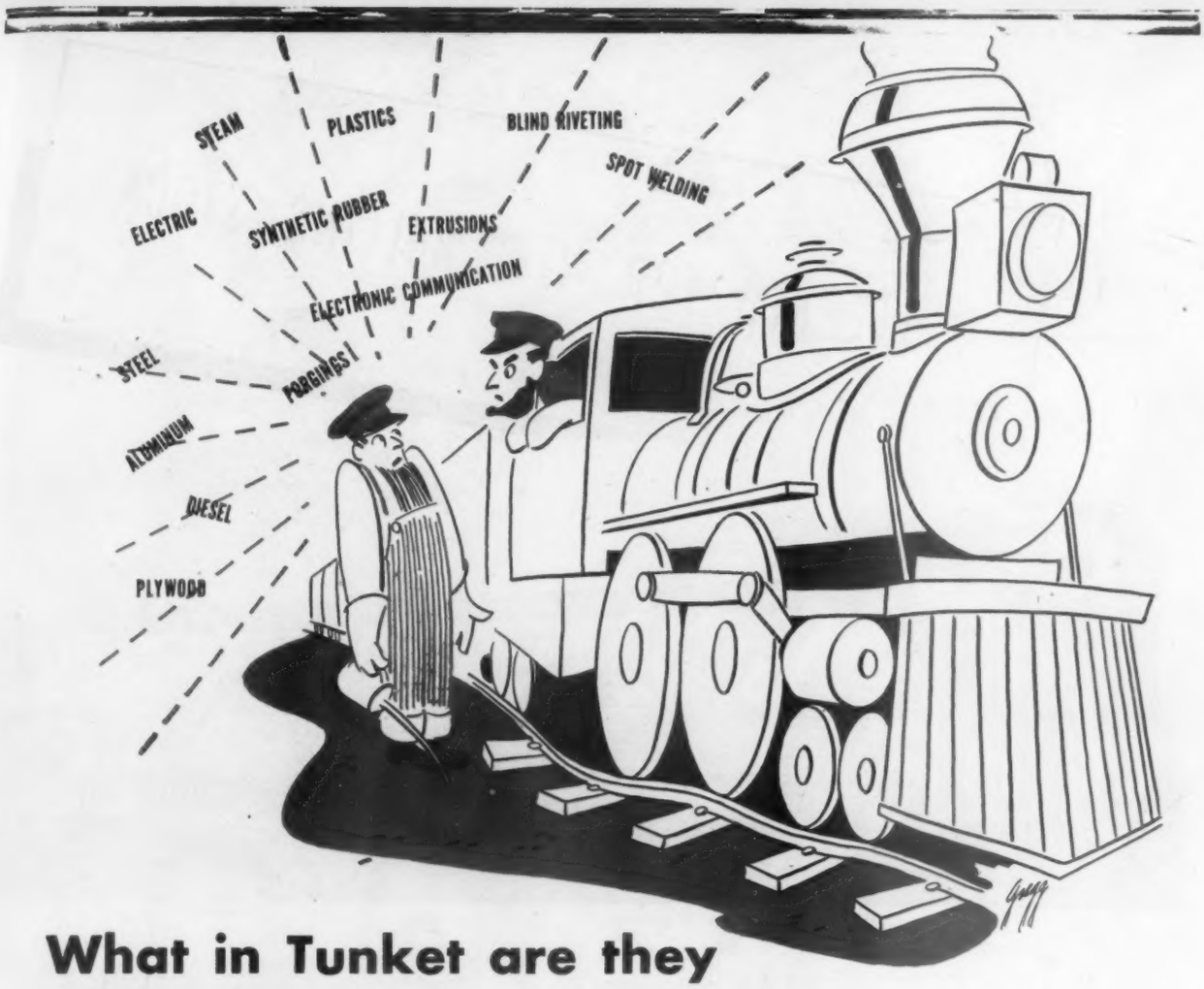
ESTABLISHED 1868

NATIONAL

MALLEABLE AND STEEL CASTINGS CO.

CLEVELAND
OHIO

SALES OFFICES: Cleveland, Chicago, New York, Philadelphia, Richmond, San Francisco, St. Louis · WORKS: Cleveland, Chicago, Indianapolis, Melrose Park, Ill., Sharon, Pa.



What in Tunket are they Jabberin' about, Jonathan?

THE OLD HOGGER has a right to be puzzled. It's enough to pull you up short when you stop and think what's happened in the last fifty years of railroading—yes, even the last twenty-five. But it adds up!

It adds up now—in 1946—to a rich combination of materials and facilities, the like of which has never been available in railroad history. A combination that cannot but make the train of the future a safer, more beautiful, more efficient train than ever before.

The organizations supplying these new materials and techniques stand ready to give the railroads all possible help in applying them. Alcoa, for instance, gladly offers its years of pioneering in the adaptation of aluminum to railroad needs. There are no strings tied to this world's richest fund of aluminum knowledge—Alcoa Aluminum, combining strength with lightness, corrosion-resistance with easy workability, will find its place among all of the other materials available.

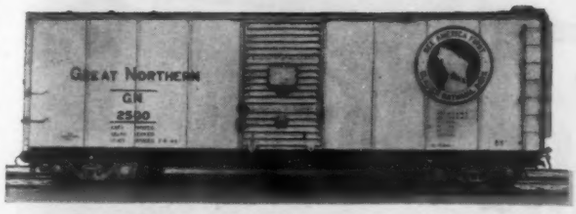
With such materials and facilities, and with a mandate from the public based soundly on American appreciation of an "impossible" war job done and done well, American railroads have a clear board. ALUMINUM COMPANY OF AMERICA, 2178 Gulf Building, Pittsburgh 19, Pennsylvania.

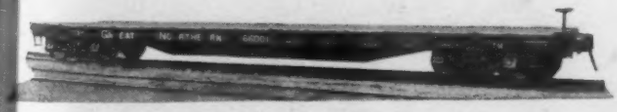
ALCOA FIRST IN ALUMINUM

Easier on Roadbed, Rolling Stock and Lading

2600 Car Sets "Serve the Best of the Great Northwest"

GREAT NORTHERN RAILWAY

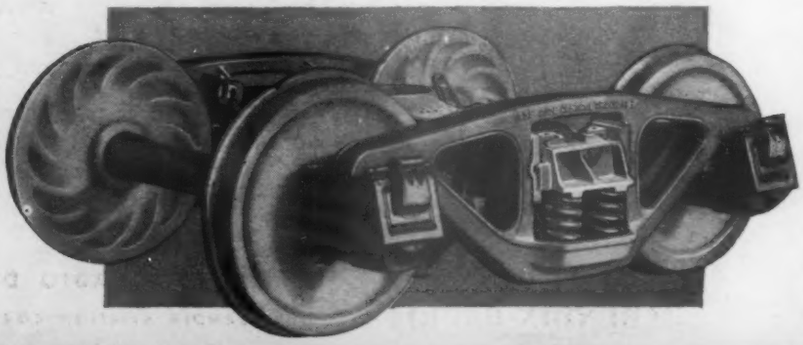




● Easy-riding Ride-Control Trucks *don't* just protect lading. They protect *rolling stock and roadbed*, too. That's why Great Northern has Ride-Control Trucks under five hundred 50-ton gondolas, two hundred and fifty 70-ton flat cars, and twenty-five covered hoppers—in addition to well over *fifteen hundred* 50-ton box cars. Great Northern's first order, placed late in 1943, and four re-orders since total exactly 2600 car sets.

Twenty-five of these Great Northern cars, in *box-express* service, combine roller-bearing and Ride-Control operating smoothness. Others, with plain journals, have traveled up to 133,000 miles. Here, as everywhere, Ride-Control has proved its performance at *all* speeds; for *all* needs.

Ride-Control Trucks on the Great Northern are daily demonstrating their *all-round utility*, which in three years has earned orders for more than 42 000 car sets from over 60 railroads and private car owners.



A-S-F *Ride-Control* TRUCK

NO SPRING PLATES • NO SPRING PLANKS

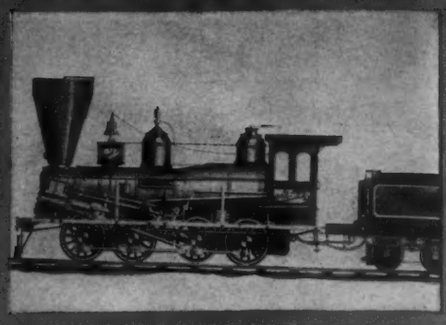
LONG SPRING TRAVEL • CONSTANT FRICTION CONTROL

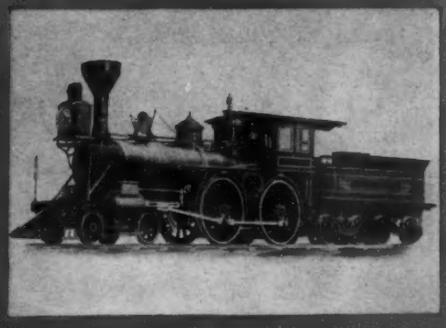
AMERICAN STEEL FOUNDRIES

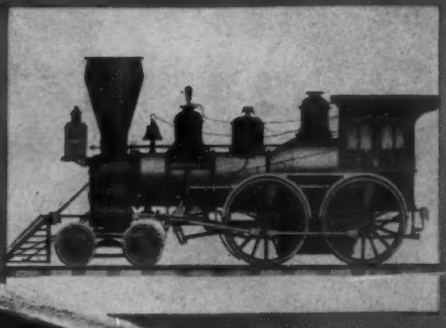
MINT-MARK OF ⬡ FINE CAST STEEL


Christmas Greetings
AND BEST WISHES FOR THE NEW YEAR
FLANNERY BOLT COMPANY
BRIDGEVILLE
PENNSYLVANIA

IN "UNION" THERE IS EXTRA STRENGTH







Every forward step in the progress of motive power has called for driving wheels of greater strength . . . to carry heavier loads at higher speeds for longer runs . . . Check "Union's" characteristics against your future requirements.

UNION STEEL CASTINGS

DIVISION OF BLAW-KNOX CO., PITTSBURGH, PA.

Seven Blaw-Knox plants have been awarded the Army-Navy "E", and have regularly received renewal stars for continued high achievement in the production of war material

★ Cruciform section spokes for great additional strength.

★ Reinforced rim support to eliminate flat spots, out of roundness, etc.

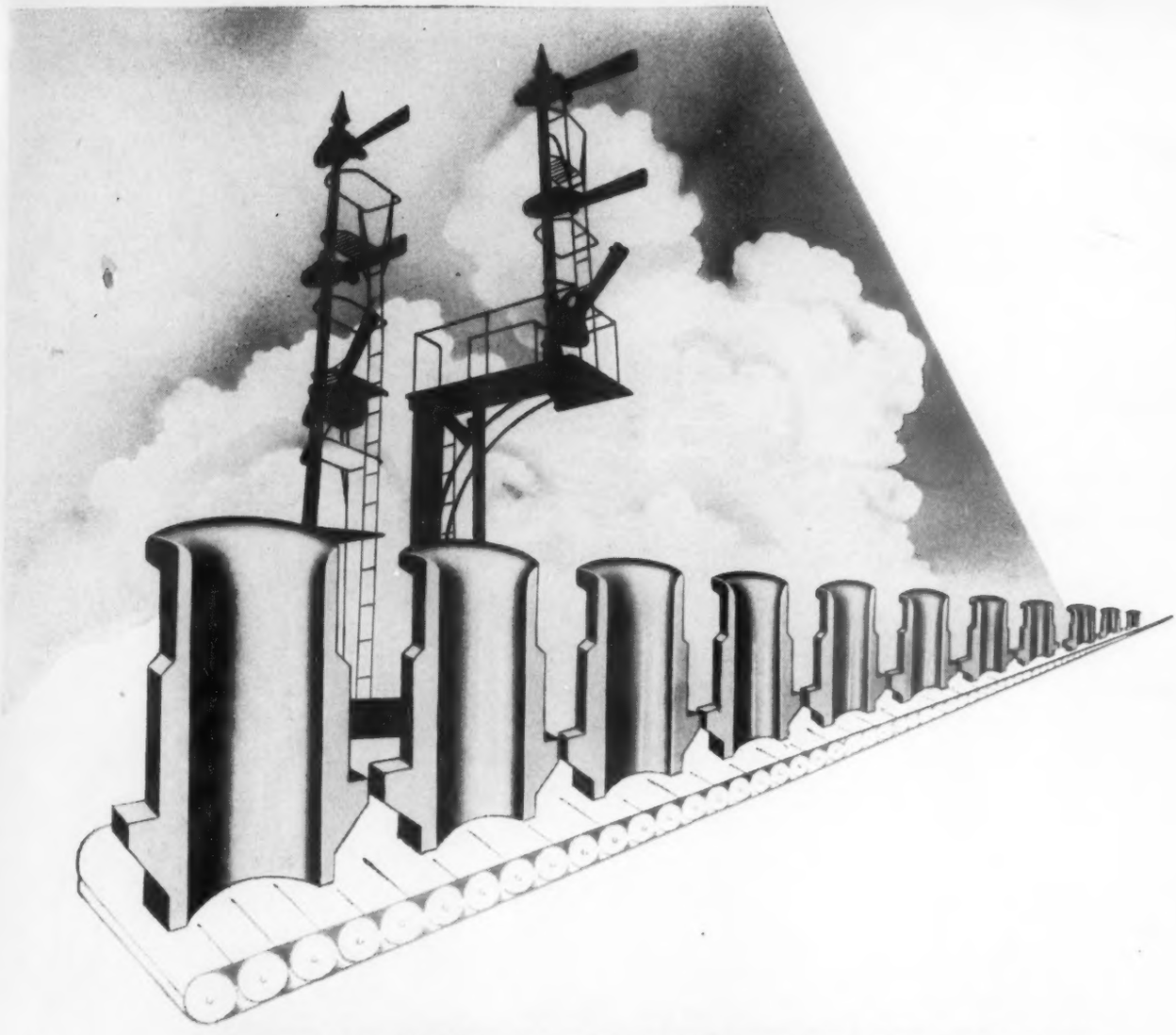
★ Correct distribution of metal for better balancing of smaller diameter wheels.

★ Wheels easily inspected before and after installation.

★ Troubles due to shrinkage eliminated by simplicity of design.

★ Can be made to any material specification.

UNION WEB SPOKE DRIVING WHEEL CENTER



"BLOCK SIGNALS" ON OUR PRODUCTION LINE PROTECT N•B•M JOURNAL BEARING QUALITY

The most modern automatic devices control every step in the alloying, casting and finishing of N-B-M Journal Bearings. This double-check on the skill and experience of our craftsmen assures:

• absolute uniformity • increased wear resistance • reduced replacement costs, • unquestioned dependability.

There's no guesswork when you specify

N•B•M
JOURNAL BEARINGS

NBM

AMERICAN Brake Shoe COMPANY

NATIONAL BEARING DIVISION
ST. LOUIS • NEW YORK

PLANTS IN: ST. LOUIS, MO. • PITTSBURGH, PA. • MEADVILLE, PA. • JERSEY CITY, N. J. • PORTSMOUTH, VA. • ST. PAUL, MINN. • CHICAGO, ILL.

MORE POWER...

Increased power and reduced maintenance is the unusual combination achieved in this great new locomotive. Its *single*, 16-cylinder, turbosupercharged engine delivers a full 2000 hp for traction—a job which previously required two engines per unit. Accordingly, maintenance operations are greatly simplified, routine inspection and servicing is easier and faster. Parts stocks are held to a minimum.

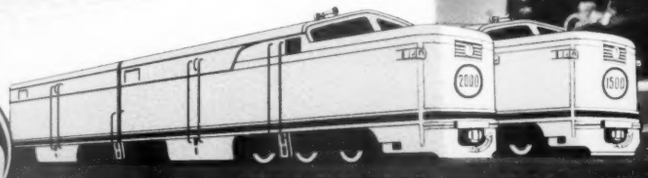
With unusually high reserve power, this engine is never pushed to produce its rated horsepower. Accurate load control insures maximum engine utilization without overloading. Uniform temperatures are maintained automatically over the entire speed and load range of the engine.

As a result, parts are subjected to less wear. Periods between shoppings are extended. One million miles of revenue service before a major overhaul can be expected.

Your Alco or G.E. representative will be glad to give you more information about the new "2000," and its running mate, the "1500." If you wish—we will co-operate with your organization in a motive-power survey to determine exactly what savings can be effected in your operations.

Builders TO INCREASE RAILROAD EARNING POWER

Alco GE



THE NEW 2000 – – 1500

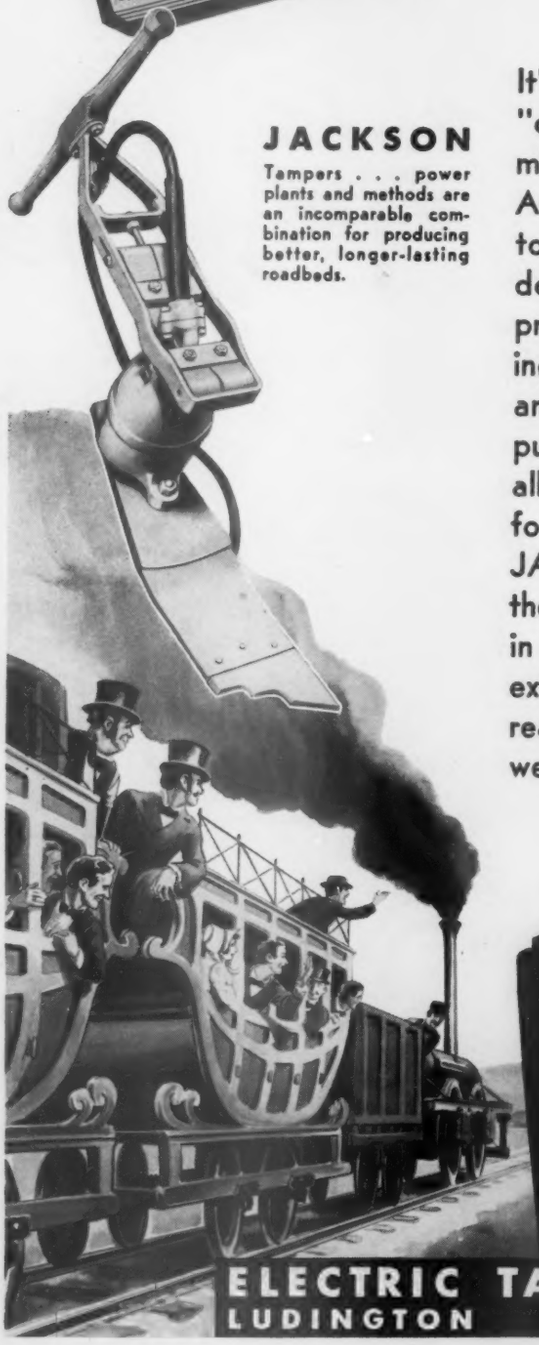
AMERICAN LOCOMOTIVE

for THE TRACK MAINTENANCE MAN — The Guy that's Really on the SPOT!

JACKSON

Tampers . . . power plants and methods are an incomparable combination for producing better, longer-lasting roadbeds.

It's a far cry from the pot-bellied, funnel-stacked "dummy" to the giant million-pound locomotive, mile-long freight trains and whizzing streamliners. And the guy that's responsible for track maintenance, today, is really on the spot. It takes a lot of heroic doing, the best of equipment and organization to provide track capable of taking the terrific pounding of present traffic demands. If you're that fellow and haven't as yet read your copy of our recently published booklet, "Let's Organize that Gang," by all means do so now. If you have mislaid it, write for another copy. Next to actually talking with a JACKSON field engineer, it's the best way to get the accumulated experience of the leading railroads in all parts of the country. Your gang foremen and extra-gang foremen will also benefit greatly from reading it. Shoot us their names and addresses and we'll send them copies pronto!



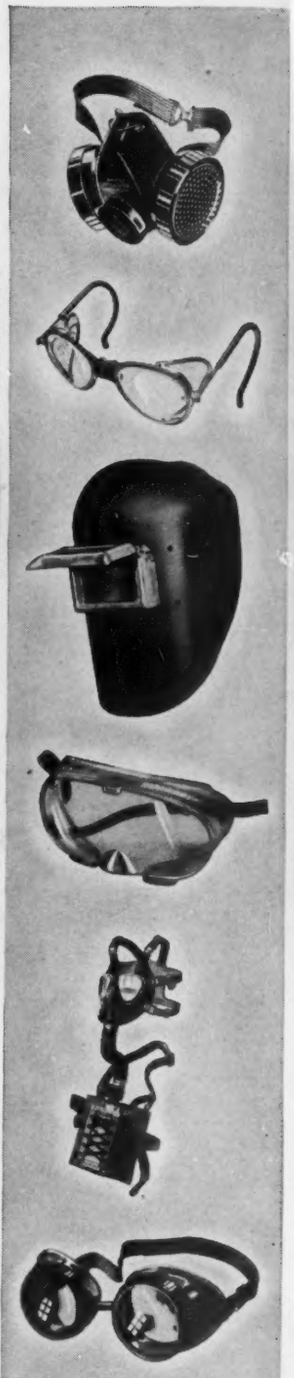
ELECTRIC TAMPER & EQUIPMENT CO.
LUDINGTON MICHIGAN

THE STANDARD STOKER CO. INC.
reasons
reelings

THE STANDARD STOKER COMPANY, INC
NEW YORK • CHICAGO • ERIE • MONTREAL

Eyes Are Safe Behind Willson Cup Goggles

Style CC402



• For a variety of eye hazardous operations, the Willson line of cup goggles furnishes complete, reliable protection.

Outstanding comfort features make these lightweight goggles popular to wear. Composition eye cups are molded to fit facial contours comfortably. Leather nose bridge keeps foreign particles from entering between the cups. Both nose bridge and elastic headband are readily adjustable.

These goggles are designed to withstand impact hazards striking from any direction. Super-Tough* lenses which must pass rigid, individual tests are uniformly heat treated to assure maximum fracture resistance.

The Cover-All* style is roomy enough to fit over ordinary correction spectacles.

Lens replacement on the CC402 shown above simplified by split end cups and spring locking.

Let us make a survey of your particular safety needs—at no obligation on your part. For detailed information on the Willson Safety Service Program write to the Railroad Sales Dept., Willson Products, Inc., 241 Washington Street, Reading, Pa.

GOGGLES • RESPIRATORS • GAS MASKS • HELMETS

DOUBLE WILLSON

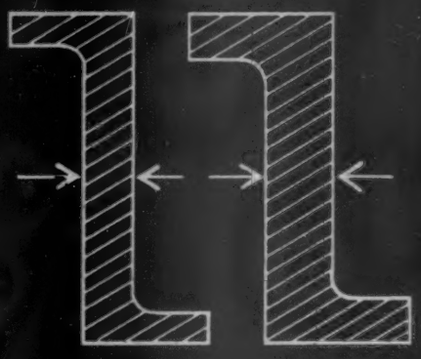
PRODUCTS INCORPORATED

READING, PA., U. S. A. Established 1870

*T. M. Reg. U. S. Pat. Off.

THE NEW ARITHMETIC IN STEEL

LIGHTER SECTIONS



=LESS STEEL PER UNIT

=MORE UNITS PER TON

THIS NEW ARITHMETIC SHOWS USERS OF HOT AND COLD ROLLED SHEETS HOW TO INCREASE PRODUCTION OF UNITS 33% WITH THE SAME AMOUNT OF STEEL

Here's a proved and practical answer to the problem of increasing production.

Make lighter sections of N-A-X HIGH-TENSILE steel. Use less steel per unit, get more units per ton. This low-alloy steel is so superior in tensile strength to carbon sheet steel that three tons will ordinarily do the work of four. Yet, with all its strength, N-A-X HIGH-TENSILE can be formed and drawn to intricate shapes because of its exceptional ductility.

You'll find other important advantages in N-A-X HIGH-TENSILE steel—excellent weldability, high fatigue- and corrosion-resistance, great impact toughness. This means a better and more durable product . . . and simpler and less costly fabricating, finishing and handling operations.

Until our metallurgists and engineers know more about your particular products and production methods, we can't tell you exactly how much N-A-X will help you. We're ready to investigate at your request.

MAKE A TON OF SHEET STEEL GO FARTHER
Specify—
N-A-X
HIGH-TENSILE STEEL

GREAT LAKES STEEL CORPORATION

N-A-X ALLOY DIVISION • DETROIT 18, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

SYPHON LOCOMOTIVES ARE BETTER

NICHOLSON THERMIC SYPHONS

Syphons produce more boiler capacity with ***less weight, less steel, less labor and less cost,*** and for equivalent results assure greater economy in service and maintenance than larger boilers without SYPHONS, plus safety from boiler explosion.

CYCLONE AND ANDERSON FRONT ENDS

FRONT VIEW OF A CYCLONE FRONT END INSTALLATION

FOUR FRONT VALVES REMOVED TO SHOW INTERIOR

Make locomotives sparkless WITHOUT NETTING—a real advance in the art of drafting. No steam failures on account of plugged netting. Better drafting with larger nozzle tips. Reduced back pressure of 25% to 40% with increased capacity and speed. Less frequent inspection and maintenance.

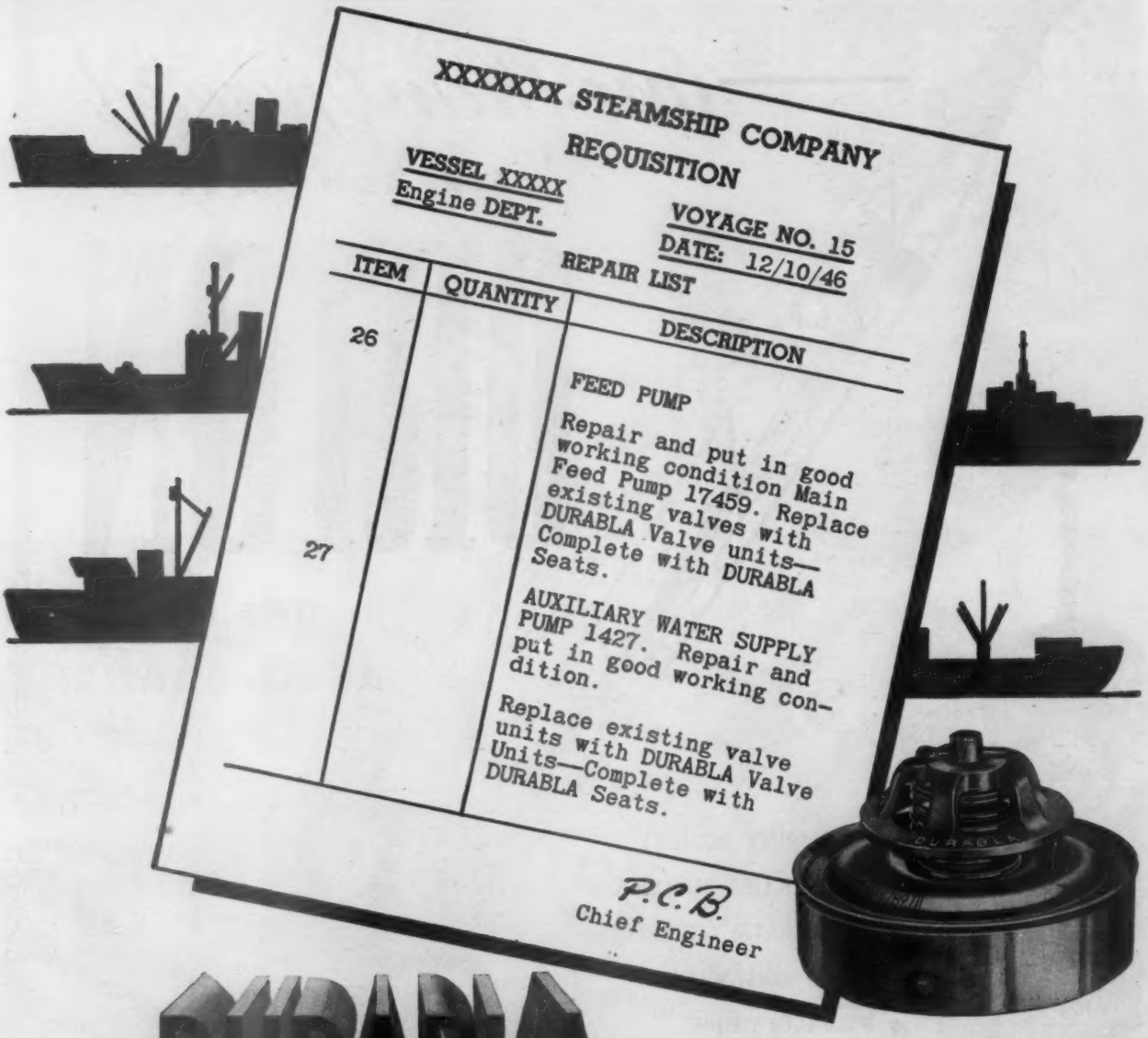
SYPHON SANDERS

No traps. No pockets and leaking joints to cause moisture troubles. No repair parts required.

May be operated with any style of cab valve. Easily installed in the roundhouse.

Locomotive Firebox Company

PHILADELPHIA CHICAGO MONTREAL



DURABLA PUMP VALVE UNITS IN MOTORSHIPS & STEAMSHIPS

In every type of marine service—Ocean going, Great Lakes, Coastal, Inland Waterways—DURABLA PUMP VALVE UNITS* are in service in reciprocating pumps, air compressors, and Diesel engines.

There is a long and impressive list of manufacturers who use DURABLA Pump Valve Units as standard equipment.

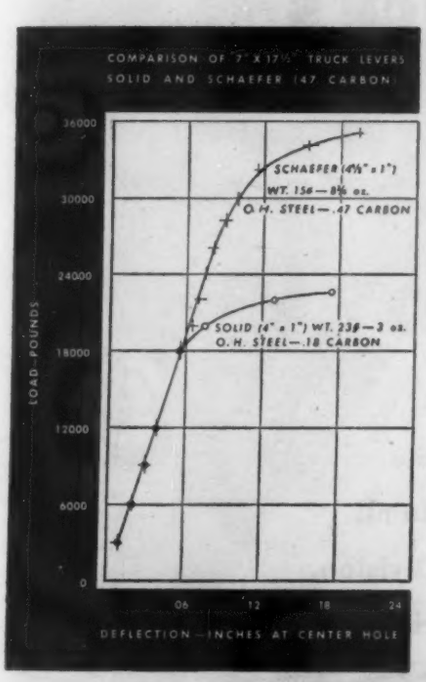
DURABLA Pump Valves used as replacement units are a guarantee of long term reliability and economy which is so important for shipboard service.

For information and bulletin address
DURABLA Engineering Department Reference 6A12

*Patent Numbers 2090486, 2117504

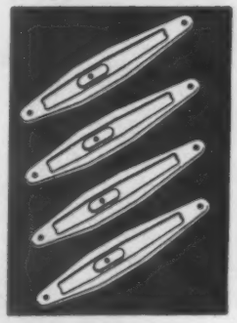
DURABLA MANUFACTURING COMPANY
114 LIBERTY ST. NEW YORK
BRANCHES IN PRINCIPAL CITIES. FOR CANADA REFER: CANADIAN DURABLA LIMITED, TORONTO

Needless weight above car wheels is extravagance that no railroad can afford...



Less Weight

So, Schaefer takes the metal that would make three levers of the solid type and forges from it four scientifically designed Schaefer levers. Each is lighter in weight by one third, yet stronger than the solid lever. The chart shows the smaller deflection of the Schaefer lever under load. Because the design is correct, resistance to stress is uniform throughout the entire length. Every manufacturing operation is accurately controlled, holes are correctly spaced and reamed to exact size. Specify Schaefer.



Full Strength

Schaefer

SCHAEFER EQUIPMENT COMPANY • • • KOPPERS BLDG. PITTSBURGH, PA.

when you visualize your new trucks

It is but natural that you can see them equipped with Hyatt Roller Bearing Railroad Journal Boxes.

Because Hyatt "Free Lateral" Journal Boxes with their simplicity of design, better riding qualities and long life have built up enviable performance records on railroads in all parts of the country. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

HYATT ROLLER BEARING RAILROAD JOURNAL BOXES

Railway Age

With which are incorporated the Railway Review, the Railway Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 121 December 21, 1946 No. 25

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In This Issue

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★

PRINTED IN U. S. A.

For Greater Protection — Complete Adaptability

Standardize with

"UNION" SWITCH STANDS

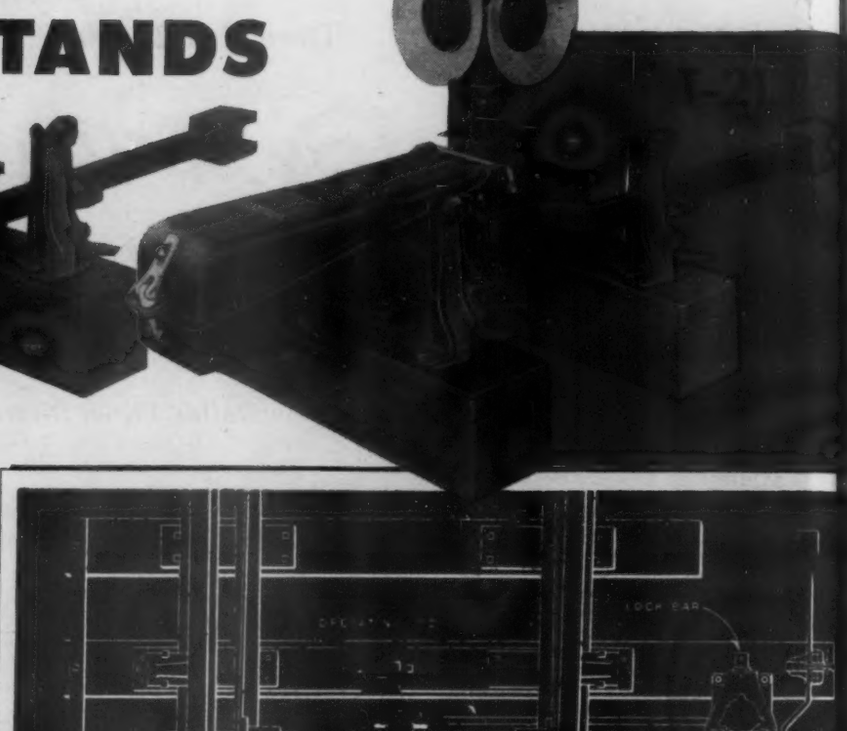
T-20

FOR MAINLINE SERVICE, standardize with "Union" Switch Stands... and thereby provide protection equivalent to that of interlocked switches.

Their design incorporates in one mechanism facilities for operating the switch, locking a standard lock rod when points are normally positioned and, by means of a point detector and built-in circuit controller for signal control, checking that (1) the lock rod is actually locked and (2) that the points are properly positioned.

They afford complete adaptability to the many variations of switch and crossover layouts . . . and, due to their interchangeability of parts, stock requirements are held to a minimum. Each mechanism can be assembled readily for either right- or left-hand layouts, with the switch point adjacent to the stand normally open or closed. Standard operating, lock and detector rods are reversible, too.

"Union" Switch Stands are furnished as the T-20 and T-21, the latter having a built-in target-drive arrangement. Write for Bulletin 156 for complete details. And standardize on "Union" Switch Stands for maximum protection at non-interlocked mainline switches.



SINGLE SWITCH—R. H. LAYOUT

SINGLE SWITCH—L.H. LAYOUT

SINGLE SWITCH AND DERAIL

CROSSOVER—BETWEEN MAIN AND SIDE TRACKS

CROSSOVER—BETWEEN MAIN TRACKS

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

The Week at a Glance

ANALYZING ARNALL: From the encomiums lavished upon it by such notoriously impartial appraisers as Henry Wallace and Wendell Berge, it would appear to be plain foolhardy even to hint that Governor Arnall's recent book could be anything less than the greatest piece of writing done since the late Karl Marx last laid down his pen. But the Pennsylvania's John Dickinson ventures to disagree with these authorities, at least so far as the governor's discussion of railroad rates is concerned. The truth is, he points out in a letter reproduced in part in this issue, that the Georgia politician has tried to get away with the old dodge of making assertions and then treating them as if they were facts, and with the equally hoary demagogic device of blaming an abstract devil (Wall Street in this case) for any evils, real or manufactured, into whose sources it may not be convenient too closely to inquire.

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CUTTING DIESEL UPKEEP: The Diesel-electric locomotive is the most valuable and expensive tool ever placed in the hands of railroad men, and its use and well-being must be carefully supervised and controlled. This is the opinion of J. P. Morris of the Santa Fe, and in an address at the recent A. S. M. E. meeting in New York, the basis of an article in this issue, he has analyzed the factors to which special attention must be devoted in order that adequate control and supervision can become part of the railroad's routine. In addition, he has suggested no less than 23 changes and improvements that should at least be considered for their possible contribution to the reduction of maintenance costs applying to this type of motive power.

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WATER LINES' WANTS: Operators of coastal and intercoastal ship lines don't like the way the railroads fix their freight rates—they should be so high that the traffic would move by ship and produce profits for the ships' owners. As explained in a news story, they have registered a complaint with the House interstate and foreign commerce committee, not only against the railroads for charging low rates but also against the Interstate Commerce Commission for allowing them to do it. Admitting that the railroads have been striving for months to get their freight rates increased, the water carriers go on to say that the increases have been "rigged" so rates with which they must compete will be less affected than others.

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NEW SHOPS ON THE Q: Supplementing the description in last week's issue of the Burlington's new Diesel locomotive shop installation at Clyde, Ill., is an illustrated article herein describing the facilities that road has provided at Denver, Colo., and West Burlington, Iowa, for running maintenance and heavy repairs, respectively, of its large fleet of Diesel-powered road and switching engines. The capacity of the West Burlington plant is at least suggested in the outline of the tools available there, including among others a 60-ft.-base machine for grinding crankshafts and axles, a wheel lathe, journal turning lathe, wheel boring mill, and a 500-ton wheel press.

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TOE PROTECTION CAR: An illustrated article on page 1050 describes the Milwaukee's traveling shoe store, the purpose of which is to get more employees to buy safety shoes and so reduce toe injuries, of which station and freighthouse and track workers have been victims more than other classes of employees.

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COMPULSORY INTEGRATION: Despite the determined opposition of owners of railroad securities, and of the minority political party, the bill to nationalize the British railroads, canals, and highway transport services appears to be making the rapid progress through Parliament to be expected of legislation which the party in control of the government labels "must." There are interests in this country that manifest great alarm at suggestions smacking of what they call "integration" of transportation facilities under private control and ownership. Integration is exactly what the British Labor Party is proposing, as the report in our news pages points out, and the owners of much of the private property to be integrated don't seem to be too happy over the terms the government is offering.

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HUMPTY DUMPTY: Though Great Britain appears to be venturing fairly far along the road to totalitarianism down which some other European countries have almost disappeared, elections still occur there at times, and the fortunes of political parties wax and wane. It is conceivable that the Labor Party may eventually lose control of the government to another party less enamoured of state ownership of business enterprises. But eggs once scrambled aren't easy to reassemble, as the nursery rhyme teaches, and it's entirely possible that it would then not be as easy or cheap to get rid of government ownership as it was in 1946 to get into it. The point is there are advocates of government ownership of railroads in America, too.

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FACE-LIFTING: With many new passenger cars on order, and others in the planning stage, the railroads stand to encounter increasing customer-resistance to the old, familiar cars that have been around a good many years. Many of them can be scrapped more economically than they can be modernized, but there are others structurally capable of quite a few years of satisfactory service. An editorial comments on the changes in the way of new decoration and equipment, modern lighting and air conditioning, improved trucks, turtle-back roofs, spacious washrooms, and dehydrated window sash that can be justified in instances where it isn't economically feasible to replace these cars. Such renovations are expected to go far towards meeting the principal objections of travelers to the old-style cars.

STRIKE BENEFITS: As the statutes are interpreted by the Railroad Retirement Board, railroad employees on strike are entitled to benefit payments from the unemployment insurance fund even if an emergency board named by the President to find the facts in the case reaches the conclusion that the strike was a violation of the Railway Labor Act. Under any circumstances, this week's leading editorial points out, payment of strike benefits from this fund—which, incidentally, is accumulated from a tax paid entirely by the railroads, not by the employees—removes practically all of the risks and inconvenience the individual ordinarily assumes when he voluntarily leaves his job. Railroad employees are almost alone in enjoying this sort of "social security." With more than an even chance of gaining something, at least on paper, so long as New Deal ideas prevail in Washington, and with such insurance against loss of income, it is remarkable that there have not been more strikes of railroad employees. But what sort of administration of responsibility is it that thus encourages the strikes that the Railway Labor Act is intended to avert?

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SOMETHING TO SELL: How far the railroads can go to get back passenger traffic lost to the private automobile is a question to be resolved by experience and experiment, but President Barriger of the Monon, in developing that subject in an article on page 1038, makes the point that no such test can be conclusive unless the service the railroad has for sale combines four factors—speed, frequency, price, and comfort. With those inducements to travel to offer, the railroad still has to offer them; that is, it has to use effective merchandising methods to expand sales and develop the volume of business that will make passenger operations profitable.

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AND WAYS TO SELL IT: If an entrepreneur has something to sell in a competitive market—as the railroads have had since the end of World War I—there is one almost certain way to *fail* in selling it. That is to insist that the potential customer must take what the producer thinks he ought to have, when, as and where the producer thinks he should have it. The alternative technique, in which Mr. Barriger sees much opportunity for the railroads to build up their passenger business to attractive levels in many sectors, requires the seller first to find out what the buyer wants (or to anticipate what he will want) and then to offer it to him in its most appealing form. Where railroads have done this they have recovered profitable passenger traffic, and some suggestions are offered toward further refinements and extensions of the same procedure.

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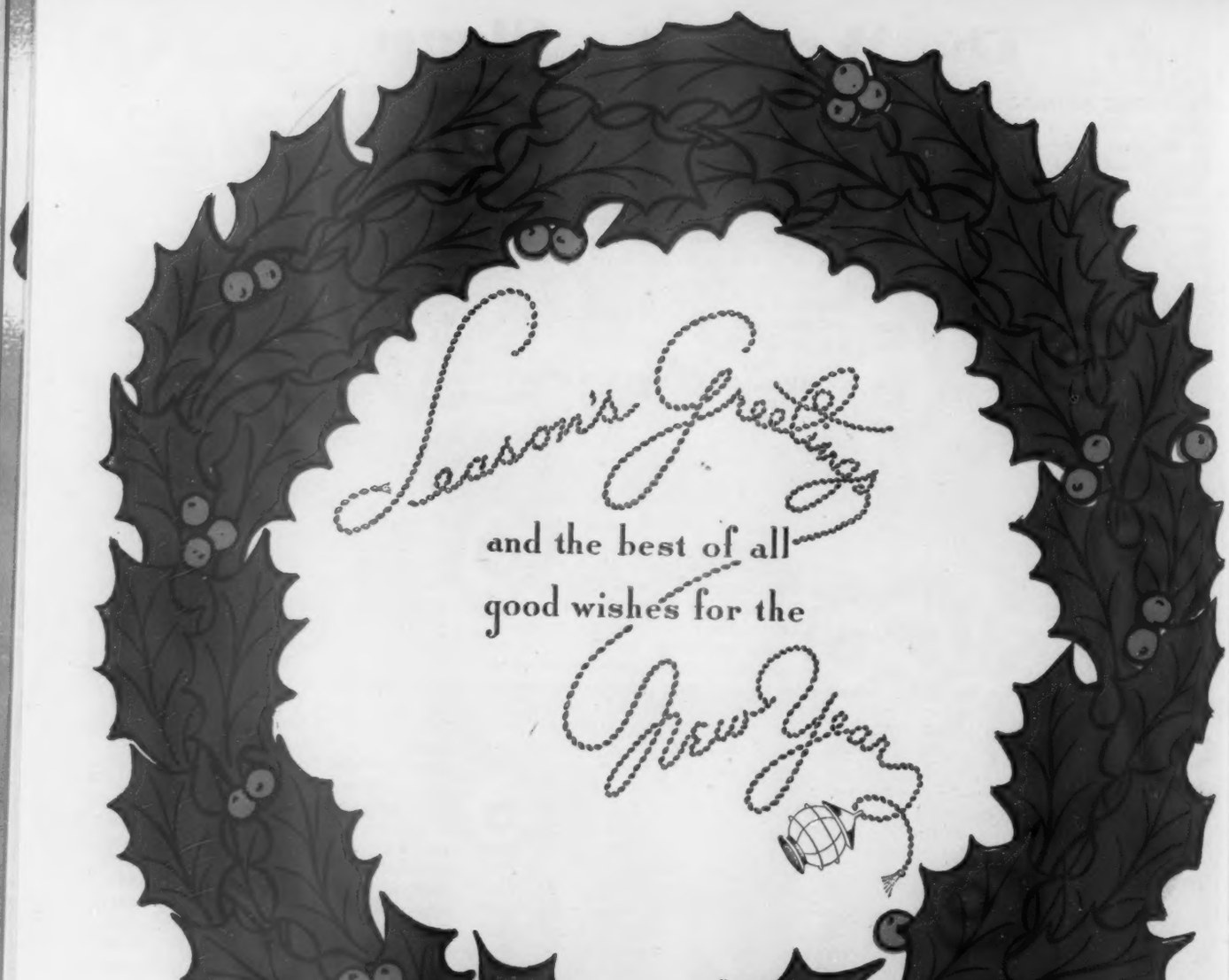
SHORT LINES, TOO: The "emergency board" considering the non-op—short line wage increase dispute has come up with its verdict: 18½ cents more for the employees of most of the roads concerned. Thus history repeats itself.



STANDARD RAILWAY EQUIPMENT COMPANY

CHICAGO—310 SO. MICHIGAN AVE.

NEW YORK—247 PARK AVE.

PLANTS

HAMMOND, IND.

NEW KENSINGTON, PA.

RAILWAY AGE

Railroads Taxed for Union "War Chests" for Strikes

The principal and perhaps the only reason why the country's prosperity, if not its very system of government, lies under constant threat of destruction by striking unions is that federal laws directly encourage and reward recalcitrant behavior by the unions. Of all such laws, none is more flagrant in its invitation to chaos than the one which levies a tax on the railroads—3 per cent of the wages they pay—to provide funds from which "unemployment benefits" will be paid to employees on strike. Experience shows that such "benefits" are paid out even to unionists whose strikes are of questionable legality under the Railway Labor Act. The American people clearly cannot expect the "domestic tranquillity" promised under the Constitution, so long as their lawmakers suffer to remain on the statute books measures patently encouraging strikes by removing all possible risk and inconvenience, including loss of income, normally associated with cessation of work.

Railroaders a Preferred Category

It is true that unemployment insurance is provided for employees of other industry besides the railroads—but on a far more modest scale, and not, in most states, in a manner to encourage strikes. Unemployment compensation for all industry except the railroads is administered by state governments—and contributions by employers to such funds vary currently from zero to 1.5 per cent of payrolls. Railroad unemployment insurance, however, is a federal matter; and the tax laid upon the railroads is 3 per cent of payrolls, or twice as much as the highest levy on any other class of employers. Furthermore, there are only half a dozen states which provide for payment of benefits when the unemployment is voluntary, i.e., occasioned by strikes. But on the railroads there is no such limitation in any state. The effect of the law as it stands is to commit the federal government to a policy of encouraging strikes on the railroads by levying taxes on them to provide a lush treasury for sustaining strikers in their economic warfare against their employers. It speaks well for the self-restraint of the railroad unions that, despite such encouragement to anti-social action on their part, they have, nevertheless, done comparatively little striking.

The Railroad Unemployment Insurance Act became law in 1939. Since that time the fund accumulated to meet claims for relief has grown to almost unwieldy proportions, being now in excess of $700 million. The Railroad Retirement Board is responsible under the law for the proper administration of this fund, and the board's members are, therefore, in a sense trustees charged to conserve the fund so that it may be available, if and when needed, for its primary intended purpose—that is, the relief of railroad men involuntarily unemployed. When the amendment to this measure, enacted this year and known as the Crosser Law, was under consideration in Congress, the need for such a huge fund, and for the further continuance of the 3 per cent tax rate, was questioned by the railroads. The brotherhoods controlling the destinies of the bill had no sympathy with this viewpoint, however, taking the position that, instead of reducing the tax, what was needed was to find more ways than the law provided to transfer some of the accumulation to employees.

While the Crosser Bill was before Congress, an event occurred which gave some of the brotherhoods what they considered to be an excellent opportunity to obtain some of the benefits of unemployment compensation. That event was a strike on the Hudson & Manhattan of employees represented by the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Engineers, which demanded higher wages and called their strike despite the fact that an "emergency board", named under the provisions of the Railway Labor Act, was inquiring into the merits of their demands. The strike began May 30 and ended June 22, when the railroad accepted the award of the emergency board named by President Truman to handle the case.

A Strained Interpretation

The Railroad Unemployment Insurance Act specifically authorizes the payment of relief in the way of strike benefits provided the strike is conducted in accordance with the "cooling off" provisions of the Railway Labor Act. It becomes possible, therefore, for a railroad employee to collect payments for not working at a time when a job is available to him and to him alone under the union doctrine that the job belongs to the man who holds it even when he goes on strike. Under the law effective at the time of the Hudson & Manhattan strike, the rate of payment varied from $1.75 a day to $4 a day, the latter being applicable to employees who earned $1,600 or more during the preceding base year. Under the Crosser Bill, which became a law on July 31, the payments have been increased. Payment of strike benefits by the unions themselves has no effect on the legality of this use of unemployment insurance funds.

The Railroad Retirement Board, in an average year,

disburses unemployment insurance benefits in thousands of cases, and an established routine has been developed to handle claims filed by employees for such benefits. Taking advantage of this procedure, claims were filed for about 700 Hudson & Manhattan employees on strike last summer, and under the board's usual administrative procedures those claims were processed and benefits were paid, beginning about August 9. One step in the board's regular procedure is an investigation to learn whether the strike producing the unemployment is in violation of the Railway Labor Act, and in the Hudson & Manhattan case the board's director of employment and claims concluded that "on the basis of the evidence available there could be no finding that there was a strike violating the Railway Labor Act." The board made no formal ruling on the point, but it did consider, on August 1, statements and arguments of union spokesmen contending that the Hudson & Manhattan strike was not such a violation, and it then allowed the adjudication of the claims to be completed without interference.

Before August 1, and in fact before the strike ended on June 22, there was available the report of the Presidential board named to find the facts back of the Hudson & Manhattan strike. In this report that board stated its conclusion that the Railway Labor Act's provision requiring both parties to a dispute to make no change in their position for a stated period following the board's appointment was violated by the strike.

The allowance of relief to the H. & M. strikers in this case, whatever technical legalities may be cited in attempt to defend it, in practical effect constitutes a stultification by the Retirement Board of the plain intent of the Railway Labor Act to encourage the settlement of railway labor disputes by peaceful processes. The rewards for striking have been made so attractive and the normal potential risks of striking have been so completely nullified as the law now stands that the American people, instead of denouncing the unions as they frequently do for the strikes which actually occur, ought rather to commend the railway unions for their relatively infrequent use of this weapon.

SELF SUPPORTING HIGHWAYS.—A syndicate of bankers has offered for sale an issue of $46,000,000 of 2½ per cent 30-year bonds of the Pennsylvania Turnpike, at a price of 102½, which means that investors are willing to finance a toll road for an interest return of less than 2½ per cent. The State of Pennsylvania does not guarantee payment of the principal or interest on the issue, either. With such evidence that highways of the "super" category can be privately financed under favorable terms without inroads on either the income or the credit of the taxpayers—what possible excuse can there be for making state and federal appropriations of taxpayers' money for the construction of such "super" roads? Isn't the burden on the taxpayers already heavy enough for support of government ventures that private capital cannot or will not finance without calling on them also for funds to build transportation facilities which, it is quite clear, can be financed from earnings of the facilities themselves?

Disposition of Older Passenger Cars

As of January 1, 1946, only about 9 per cent of passenger-train cars on Class 1 railroads were less than 11 years old and 47 per cent were over 25 years old, according to statistics recently released by the American Railway Car Institute. These figures, not startling for they are quite generally known, reflect a condition which confronts American railroads with a real problem. What disposition should be made of the older conventional-type passenger cars, now so largely used in main-line, branch and suburban service? Should they be retired and scrapped, or rebuilt and modernized and, if the latter, to what extent?

Considerable pertinent information bearing on these questions was presented in a committee report and discussion at the recent annual meeting of the Car Department Officers' Association in Chicago. This was reviewed beginning on page 723 of our November 2 issue. The consensus seemed to be that only new streamline equipment can be expected to meet modern passenger requirements for through main-line service. Older cars, especially those which have been air-conditioned, can be converted into modern or semi-modern types by the application of improved interior decorative treatment and equipment and still give some years of satisfactory performance in local main-line and branch-line service. This leaves a substantial percentage of present passenger-car equipment which may be safe to operate and carry passengers but is obsolete from every modern standpoint and, hence, should be permanently retired and scrapped at the first practicable opportunity.

The committee report referred to includes a tabulation which indicates that of 47,700 passenger-train cars now in service and scheduled for delivery this year only 6,500 are modern lightweight cars; 17,000 are modernized conventional cars; and 24,200 are older conventional cars. The report recommends that a program be set up whereby 2,000 cars will be completely modernized, 12,000 cars partially modernized and 19,000 cars given scheduled maintenance only. This apparently leaves 14,700 cars subject to scrapping.

It is interesting to note that the C. D. O. A. committee apparently considers air-conditioning an essential element of any passenger-car improvement program which involves either complete or partial modernization. In the case of complete modernization, the committee also recommends the application of roller bearings and truck improvements for easy riding, turtle-back roof construction, double-glazed dehydrated window sash, improved fin-type radiation and zone heating equipment, fluorescent lights, modern interior decoration and equipment, and completely refinished exteriors after removal of all old paint.

For partial modernization, no change is recommended in truck journal bearings, or the roof structure except such alteration of the latter as may be required to accommodate air ducts and cooling units. Window sashes are sealed, but not renewed. Lighting is modernized so far as possible, without changing to fluorescent lights. The heating equipment is thoroughly overhauled, new and larger washrooms installed, present seats re-

upholstered and the car interiors and exteriors refinished, probably in brighter colors, but without removing old paint down to the steel.

The concluding suggestion in the committee's report is the particularly apt and concise recommendation that conventional passenger cars be maintained as befits their condition rather than their age, their construction rather than their weight, and finally their cost of rehabilitation as against the cost of new cars.

The Close of an Era?

Members of the mechanical staff of this paper write frequently on the subject of motive power. Many of the ideas that eventually form such articles come from railroad men and from those who design and build locomotives. In the course of a discussion of motive power with a railroad officer recently he asked, "Why not write something about three-cylinder locomotives?"

In the light of experience, maybe the question was not intended seriously. A few days later, though, this suggestion having been mentioned to a man who knows the three-cylinder locomotive, both as a railroad man and a builder, a point was brought out that has escaped the attention of many who have concluded that this type of locomotive is a failure: namely, that its real handicap was not inherent, but rather one of maintenance difficulties and maintenance cost. It was even suggested that if materials, details and facilities available today had been at hand 20 years ago the story of this type of power might have been different.

The real test today of a motive-power unit is its reliability and what it costs to haul a thousand gross ton-miles. When the three-cylinder locomotive was exploited—about 20 years ago—the major interest of its proponents was a smoother operating form of steam power with increased adhesion as compared with the two-cylinder type. Reliability and low maintenance expense were not then of the primary importance which they have since assumed. Among the factors forcing this change in emphasis were the development of long locomotive runs and the competition of the Diesel-electric as to availability and maintenance cost.

The fate of the three-cylinder locomotive is a symbol of a present trend which, so far as the future can be foreseen, may be even stronger 20 years hence than it is now. That is, that no change in the reciprocating steam locomotive, no matter how successful it is in improving road performance, is likely to survive if it adds to the cost of maintenance or to the frequency with which the locomotive has to be withheld from service.

For a great many years the demand was for increased locomotive capacity. It made little difference whether a new locomotive was more efficient than its predecessors or how much more it cost to maintain so long as it provided the capacity to increase the train load. Indeed, all measures for improving steam locomotive efficiency were translated into increased capacity. Thereby ton-mile costs were steadily reduced.

Train lengths are now stabilizing and major cost reductions can no longer be effected by reducing train-miles. The locomotive has got to contribute its share through increased efficiency and decreased maintenance.

Cost Control in M. of W. Operations

Whether recognized or not, some railroad departments have a long way to go in applying effective cost control methods to their operations. As a result, every day, lack of pertinent information allows leaks to persist, which may be small individually but are collectively very large. Sometimes the difficulty arises from shortcomings in accounting and statistical methods, with insufficient break-down of specific accounts to permit careful analysis of individual operations; but more often the trouble comes from delay in the preparation of production and cost figures. Contributing, too, and often in a big way, is a lack of adequate concern and appreciation for costs on the part of some departmental heads.

While the engineering department is, of course, no more inattentive to cost factors than are others—would anyone care to contend that cost-control figures for maintenance of way operations on most railroads provide more than a hindsight of completed operations? When figures are delayed, all opportunity is lost to use the lessons they teach in work currently under way; and to initiate improvements in methods or organization needed in the interest of maximum economy.

The practice of most railroads leaves much to be desired both in the detail shown in the cost figures furnished to higher maintenance officers and in the speed with which such figures are made available. Too often the figures supplied are not in the most helpful form, and even these come along too late to permit correction of substantial operational losses.

Confronted a few years ago with just such a situation as this under centralized disbursement accounting, the engineering department of one railroad established its own system of cost records and analysis which, through the current assembly of daily reports of all work operations, now gives to system and division supervisory officers in semi-monthly and monthly statements all of the data necessary to the careful control of expenditures —particularly labor. Reporting on this arrangement recently, the engineering accountant of another road had this to say:

"The system employed has many advantages. It has enabled the road to standardize both construction and maintenance operations; it gives supervisory officers a chance to budget their expenditures carefully and to adjust them currently as required; and it shows up inefficiencies promptly and creates a spirit of healthy rivalry among the roadway forces. In my opinion, the system has far more than paid for itself through improved methods, increased increased efficiency, reduced overtime and close control of all costs."

In the face of constantly rising labor and material costs, the railways need more of such cost figuring in their engineering departments—and every increase in costs makes this more important. It has been said that an engineer is a man who can do with one dollar what any dub can do with two. The railroads need more engineers who can meet this specification and who will insist on getting at the facts and figures which will enable them to do so.

Travel Test Should Omit No Essentials

Four factors needed to persuade motorists to ride trains and no test is conclusive if any one of them is neglected

By JOHN W. BARRIGER
President, Monon

Mr. Barriger's article, "Let's Give the Travel Market a Real Test," in our November 16 issue occasioned extensive comment—mostly favorable, but occasionally with some reservations and exceptions. One observation by a railroad officer with considerable passenger traffic experience, pointed to efforts—primarily lower prices and greater comfort—which one road had made to retrieve its dwindling travel business, these experiments succeeding in some cases and failing in others. This officer concluded from this experience that generalizations as to the expedients which will revive passenger traffic are unreliable, and that varied combinations of attractions must be tried until the right one is found—with the distinct possibility in some cases that no mixture of favorable factors which is practicable will succeed in turning the trick.

In this article, adapted from a recent address to the Chicago Passenger Club, Mr. Barriger supplements his November 16 expression, setting forth more explicitly the aspects of his earlier article which provoked such questions.—EDITOR.

BY 1932 and 1933 the improvement in highways and automobiles had promoted private passenger transportation so far that railroads were no longer competing successfully for passenger traffic except for the hauls of maximum length, which produce a comparatively small proportion of aggregate volume. It got to the point where railway officers and employees were using their own automobiles, at their own expense, to make trips to places where they might have ridden free on the trains, but did not do so because of the slow, infrequent or otherwise unattractive service which then prevailed. It has been observed that nothing is so conducive to education and refinement as travel; and one might add that nothing is so conducive to travel as a free pass. However, when automobile transportation was frequently preferred by those who could "deadhead" by rail, the commercial status of railway passenger traffic was in danger of extinction.

Fortunately this spiral into oblivion was quickly reversed. The railroads arrested the acute anemia afflicting passenger traffic by a wide range of improvements in service and merchandising which are too familiar to require cataloguing. However, the vital element without which all else would have been futile was the sudden discovery that *speed* and *travel comfort*, for coach and Pullman patrons alike, could succeed in selling passenger service to a nation possessing so vast an ownership of automotive vehicles that, in the aggregate, they contained nearly enough seats for the entire population to ride at one time. All of us have had experience indicating that on holidays and weekends at least 110 per cent of all of the automobiles were out on the road.

It was not, however, the mere number of automobiles which constituted their primary threat to travel by rail. The most serious competitive reaction arose from the fact that, except in certain densely populated areas along the Atlantic coast between Boston, Mass., and Washington, D. C., whatever travel could be done by automobile by day would yield a material *time saving*—as well as the corollary advantages of *economy* and *release from the inconvenience of infrequent schedules.*

Encroachment by Autos

The fiftieth anniversary of the automobile was commemorated by appropriate ceremonies in Detroit a few months ago. The half-way point in the life of this vehicle occurred, therefore, in 1921, and that was the first year in which it began its erosion of railroad passenger traffic. During the previous five years it had whittled down street and interurban railway business, but had not noticeably affected railroad volume, which after nearly a century of development established its pre-World-War-II high-water mark in 1920. However, after that, travel by rail slipped perceptibly in spite of gigantic increases in total travel in the United States, because automobiles offered more and more attractions. By 1932 highway transportation had shrunk railroad passenger traffic to about one-third of its 1920 level of revenues, numbers of passengers and passenger-miles. Probably never since the walls of Jericho fell before the blast of a trumpet had so great an institution collapsed so quickly and with so little effort at its defense as did the railway passenger traffic of that time.

In retrospect, it appears that it was not until 1930 that the railroads became fully aware of the effects of the private automobile upon their passenger business, and by that time dangerous inroads in revenues from this source had already been made. Even then, most railway officers evidenced little concern, because they regarded the decline of passenger traffic as a sort of "blessing in disguise," being subject to the subconscious or semiconscious influence of factors which I mentioned in my article in the *Railway Age* of November 16.

Before 1920, when the railways had virtually a complete monopoly of the nation's passenger transportation, effective merchandising methods would probably have built up greater volume and revenues than were actually recorded, but such methods were not necessary to insure a substantial and profitable business at almost any standard of service and schedules the railroads cared to provide. However, once long-distance automobile travel had become fast, convenient, economical and pleasant, railway passenger service could be sold only by having it comprise an effective combination of: (1) speed; (2) frequency; (3) price; and (4) comfort and attractiveness of service; and even these characteristics alone would not have automatically assured a large volume of passenger traffic. Merchandising, also, was needed.

Merchandising is the science of finding out what the public wants and what it is willing to pay, and then providing a product to meet those specifications. The object of this activity is the expansion of sales and profits through stimulating increased volume—frequently at reduced margins of unit profit—but with greater total earnings than could be obtained by ordinary or haphazard sales methods. The antithesis of merchandising is the determination of the quality of the product by the producer's idea of what the public ought to have, and with a minimum of concern on his part for stimulating sales and profits by the application of scientific methods of pricing.

In a competitive market, merchandising is necessary to bring in the maximum revenues and it will be increasingly important in future. All of the four service features I have listed above are essential; none can be slighted. Unfortunately, the railways have seldom provided all of them simultaneously.

Prior to the early 1930's schedule frequency was the only one of the foregoing requirements that was reasonably well met. By 1934, when the railways had become sensitive to the need for speed, lower pricing and comfort, the mortality of the schedules had been so great that those remaining on many routes were inadequate to permit traffic recovery, and, in many places, have remained so to this day. Eventually, more frequent or conveniently timed schedules must be established on many routes, since both are vital components of competitively attractive passenger service.

Passengers an Economic Factor

It was generally recognized that the loss of foreign trade greatly aggravated the depression of the 1930's for, while its volume was small in relation to domestic commerce, it provided the final increment needed for optimum working of the economic system and the full utilization of all of its facilities for production. Railway passenger traffic actually holds the same economic relationship to successful railway operation that foreign trade does to national commercial well-being. Its loss, therefore, in far greater proportion than even the shrinkage in general business activity in the early 1930's provided a devastating reinforcement to destructive fires of deflation caused by the collapse of other railway earnings. Furthermore, the spectacle of empty passenger trains, quite as much as the financial anemia of the results of railway operations then current, caused a completely defeatist attitude to seize railway patrons and investors. Those many passengers who thought railroads were "through" as passenger carriers automatically began to shake their heads, also, over the railroads' vulnerability to competitive agencies of freight transportation.

The contagion of this pattern of pessimistic thinking soon began to spread among railway personnel, both officers and employees. The deepest debt of gratitude is, therefore, due to those courageous railroads which did the most to reverse this psychology. They injected hope into this industry and, in all likelihood, rescued it from precipitate decay and collapse which might have brought federal operation and all of the deadly poisons that such a catastrophe would have injected into the American system of private enterprise. The disaster was averted by certain railways bringing quickly into action the atomic bomb which the industry had possessed all along but had never thought to use—*high speed*.

The paramount reason why the private automobile and motor bus and the motor truck diverted great quantities of railroad traffic was their ability to get passengers or freight to their destinations more quickly than if they went by rail. In some cases they did it cheaper, too, but that factor alone was not controlling.

The Union Pacific's "City of Salina" and the Burlington's "Pioneer Zephyr" heralded the developments which saved railway passenger traffic—and the railway industry along with it. Paradoxically, the automotive industry which had caused the railways' plight turned around to save it by furnishing the required new type of power—the Diesel-electric locomotive which speeded up passenger service and thereby assured its recovery. Also, and with parallel effect, the Pennsylvania's electrification was completed at that time—a feat which will doubtless long remain as the greatest single improvement ever made by any railroad.

As a matter of fact, however, Dieselization and electrification are fundamentally the same process, i. e., each consists in substituting an electric motor for a reciprocating piston as the medium through which mechanical force is applied to locomotive driving wheels. The Diesel-electric is a self-contained unit carrying its power plant around with it. In a system of railway electrification, power generated at central stations is distributed to the locomotive through a system of overhead transmission wires. From the standpoint of the passenger, the results are the same. The difference between them is a detail of railroad economics and operation related to comparative traffic density, which determines which of the two alternatives will be preferred.

The initial inadequacies of the internal combustion engine for railway service—measured in terms of power output and cost per horsepower—placed for the first time a premium upon lightweight streamlined cars. Hence the development of the Diesel-electric locomotive and lightweight streamlined cars started out as Siamese twins. Each appeared to be indispensable to the life of the other. They continued as such until, by 1938, the power output of this new form of motive power had been developed *up* to—and the cost *down* to—the levels at which it could be economically employed to haul trains of conventional size and weight. But, although Diesel locomotives can now handle standard-weight trains easily, lightweight passenger cars have proved so useful that they are now being built in great quantities, and to the exclusion of older designs.

Incidentally, let us stop and recall that the Dieselization of freight service began in an experimental way, only as recently as 1939-40. The tremendous development of the Diesel locomotive and its current pre-eminence in lists of new locomotive orders obscures realization of just how new it is.

Sometimes, out of old weaknesses, new strength is gained. The ultimate importance of the self-contained electric locomotive (which at the present time uses the Diesel engine as its prime mover, but which all coal-carrying railroads—and the Monon is one—hope will soon use coal-fired steam or gas turbines to drive the electric generators) will probably prove to be such a great ultimate blessing to the railroad industry as to have been worth the cost, even, of the travail which forced its birth.

The two baby streamliners that were born in 1934 could have themselves produced but a tiny quantity of passenger service—but they "showed the way." They at once caught the public imagination. It is not going too far to say that the population which they served was convulsed. Positive proof of that assertion was found in the great crowds that came out everywhere to see them at stations and to watch them pass. Their success spawned other streamliners and the effect was contagious—upon the public and upon patrons across the nation. The defeatist attitudes were forgotten and hope, promise and optimism emerged anew. As additional trains of this type went into service during succeeding years, the crowds came out to see them too. Many were placed in service on main routes and, even where travel had dwindled to a trickle, the tonic effect of these new services was electric.

Streamliners Pay Dividends

The efficacy of speed and attractive equipment continue unimpaired. No high-speed streamlined train has yet been placed in service on any American railway that I know of which has not produced annual earnings representing high utilization of revenue capacity, while the yearly accumulations of mileage of trains of this character are astronomic compared to averages of the conventional ones. Such new trains not alone produce direct additional revenues and operating profits, and not by stealing the traffic of existing trains, but they have indirectly revitalized many old-standard trains through the restoration of travel which uses the old ones on one part of a journey because the fast ones are available on the other. This accelerated passenger tempo has exhilarated the freight services, too.

Railways are mass producers of transportation. This should give them a great advantage in costs of production

and help them to make competitively attractive prices. Railways should also be mass producers of high-speed services. Everything is relative and our standards are high or low only in comparison with the characteristics of the substitute services or products that may be available. Trains which seemed like "flyers" when compared with trolley lines and horse-drawn vehicles or automobiles on dirt roads were quickly relegated into inferior status by modern, high-powered automobiles running over roads designed for high speed.

The victory formula for railway passenger service is effective pricing and higher speed, which, not forgetting frequency and comfort, will produce the volume required for profitable mass transportation. With such volume, the railways can offer profitably both a cost advantage and a speed which will get their passengers to destination much more quickly than they can go by highway vehicle.

Railway passenger service is sold directly by the producer to the actual consumer; there is no middleman. All enterprises which sell a finished product directly to individual consumers must depend upon merchandising methods to create the sales appeal that will build the required market outlets. Let the railroads take good note of how the automobile industry stimulated the public demand which put thirty million cars on the highways over such a short span of years.

Natural Forces Not Enough

No mass production industry can depend upon natural forces alone to produce an adequate market. It must be stimulated by modern sales methods. That is one of the most potent forces underlying our national prosperity and development. The record of all mass-produced consumers' goods should offer proof and encouragement as to the feasibility of selling railway passenger service in greatly increased volume. Certainly it should be no more difficult to stimulate a demand for railway passenger traffic through merchandising methods than for cigarettes, breakfast foods, beverages, movies, radios, electric refrigerators, and so on through the list of everything that goes into our daily life.

Fortunately, nothing seems to lend itself to the easy development of sales appeal more than travel. If it were otherwise, where would the automobile business be? Few if any human beings are really happy and contented with their own lives and are wholly free from worry. Everyone must live largely in his imagination; it helps him to achieve his ambitions and to relieve the problems and disappointments associated with the contact of his immediate environment. Vast industries exist to help Americans spend more time with their imaginations and less with unattractive environments. Whatever releases us from the pressure of immediate circumstances does that. One could list beverages, tobacco, the movies, reading, music, entertainment and automobile travel as a few of the great businesses which find their great market in fulfilling the desires of individuals to be released from the limitations of their actual circumstances. Why shouldn't the railroads do so, too?

While, to be sure, "there's no place like home", attendance at movies and clubs and places of entertainment and the appearance of the highways on weekends, Sundays and holidays, indicate that Americans also like occasionally to be in a great many places besides their homes. The range of individual interests is constantly broadening; ambitions, friendships, family demands, and a myriad of other influences cause almost everyone to want to be in innumerable places for varying reasons at different times of the year.

This basic urge constitutes the great merchandising opportunity to sell passenger transportation on a mass production basis at a profit. Then, again, the realistic part—travel for business or professional purposes—as well as the pleasure and fantasy of American life—provides a vast market too. It remains only for men of merchandising skill on the railroads to find a winning combination of the four basic factors which I outlined earlier, but will repeat for the sake of emphasis: (1) speed; (2) frequency; (3) price; and (4) service.

As for speed, I believe that 70-m.p.h overall passenger schedules, terminal to terminal, will be required to make train travel more attractive than motor travel and likewise to reduce travel time to the point that the traveler in the "upper income" brackets will consider, on balance with the other advantages which trains can offer and airlines cannot, that he will go by rail, except when the pressure of time is extreme or some other feature of air travel may have compelling attraction on particular trips. Sustained top operating speeds of 100 m.p.h. will be required to produce this 70-m.p.h. average. To achieve such levels with a trainload that will permit a competitively attractive fare will necessitate doing something about the grades and curves on much American railway mileage. However, that is a separate story in itself.

Of the four ingredients of passenger traffic success, frequency alone is the one on which generalizations cannot be made that will be uniformly applicable to all parts of the country. Obviously, frequency is closely related to density of population, and there would necessarily be wide variations in the number of daily trains needed to maximize passenger travel over lines which would be as diverse in this respect as the northern transcontinentals, on one hand, and, on the other, the main lines paralleling the Atlantic seaboard, where trains have more the rapid transit characteristic of running "on headway" than "on schedule". The only general observation which can be made is that on the greater part of the railroad mileage of the country, present infrequency of schedules is a handicap to traffic development. However, frequency alone without improvements in the other categories would avail little revenue, and would entail much expense. It is putting the cart before the horse to increase frequency before speed, comfort, and economy have first been provided.

Ticket Buying Still Tedious

One handicap in the development of railroad passenger business is that those travel experiences which are most tedious and difficult for the cash customer are the ones which are completely removed from the ordinary experience and direct personal knowledge of railway executives. I have particular reference, here, to the routine relating to reservations and ticket purchases. Of all branches of the science of rail transportation, this is the one which, in the opinion of the average traveler, has made the least, if any, progress over the past span of years, and these comments wholly exclude any reference to the admittedly extreme emergency conditions of the war.

The average railroad officer high enough to do anything about major modernizations of reservation and ticket selling practices seldom, if ever, has had the experience of finding out how existing routine really works. I refer wholly to the time requirements per transaction and do not comment on the purely haphazard personal incidents which may or may not add to the purchaser's high regard for the railroad. In general, I believe, the conduct and attitude of ticket-selling and reservation employees are good.

Perhaps one reason that progress has been slow in improving passenger service from the standpoint of the passenger, apart from matters of train performance, is that no system has yet been devised which will promptly inform railroad officers of inadequacies in the service from the standpoint of their patrons. When food is improperly prepared or served, when employees are not up to the desired standards of civility, courtesy, attention and efficiency, when cars in service are dirty, the temperature or ventilation improperly controlled, there is no report which goes automatically and immediately, as do reports of train delays or engine failures, to the

executives who could correct these conditions. It is only by chance that the officers responsible are informed of deviations from the standards which they desire to be maintained, and usually only because the information is reported haphazardly to them by passengers. There is no adequate system set up whereby imperfections in these important respects are regularly brought to the attention of the division operating and traffic heads.

The requirements of the freight service, which is the "main show" of railway operations, very largely set the standards for the types of information which railway operating and traffic officers regularly obtain. Such traffic, being inanimate and impersonal, does not require the same detailed type of information and attention that is necessary for adequate supervision of passenger service—which must accompany the high standards associated with the merchandising of a highly competitive article. The type of supervision required to maintain good passenger service is entirely different from that needed for freight train operations. Passenger service gives rise to some problems more akin to those met in housekeeping than in railway operation, and requires a different technique of administration and supervision from that which has been developed to supervise train movement and yard switching.

The details of attractive services are always interesting to catalogue, but I forbear the temptation to name them in detail since to do so would be but flailing some well-threshed straw. I am greatly impressed with the superiority of the new equipment as compared with the old from the standpont of passengers' convenience and comfort. The cost of new passenger cars, however, runs into or close to six figures per unit. That alone puts a ceiling upon the number of new cars that can be justified for the time being, and the reconditioning and modernization of many existing cars which are structurally adequate will, therefore, be necessary to integrate them successfully into future standards of service.

Economic Value and Savings

The economic value of lightweight cars is related to the savings which follow the cost of hauling lesser trainloads or the revenue advantage of getting greater train length and capacity within the same train weight. Weight saving produces tangible gains in super-speed schedules that cannot be found if such cars are used at conventional speeds. Paradoxically enough, in my opinion, the general traffic development of the next few years, if it follows the pattern I suggest, will also preserve and create a great deal of "intermediate" traffic. This will necessarily be handled on trains making a sufficient number of stops to preclude adherence to the required high-speed standards of through schedules. These trains will provide work for many present passenger cars of conventional weight and design—although they need to be modernized inside.

Railroad men have naturally had their thinking attuned to distance as the measure of travel and transportation. That means much to them, but miles, of themselves, mean little to travelers who think wholly in terms of what a trip costs them.

We pay for everything in units of time and money. We have limited quantities of each and costs are reckoned in both. Every business uses the services and the money of others and the basis of compensation for them is determined by the length of time in which each serves its user. It follows irresistibly that whoever can perform a service more quickly and dependably than his rival has a decided competitive advantage.

When a prospective traveler plans his journey he instinctively thinks of what it will demand of him in terms of time and money. The hours are just as much a part of the expense of the trip as the actual cash outlay. The distance itself is meaningless except as it influences the time and money requirement. If it required no greater number of hours or dollars to make the trip from Chicago to New York than between New York and Philadelphia, the trains between those former points would be running on a ten-minute headway during the rush hours of the day, too. The observation is not made with the belief that improvement in railroad service will ever permit a 900-mile trip of the future to be made on the basis of a 100-mile journey of today, but merely to emphasize a point which it is important for railway officers to bear in mind.

Railroads are necessarily time-conscious about matters which relate to their own expense and performance but sometimes are unaware that time is no less valuable and important to their patrons than to themselves. This observation relates, not only to the necessity of keeping trains on time but equally so to not having schedules slower than necessary. Railroads are aware of time losses due to late schedules; they should also be conscious of time losses due to schedules longer than necessary even though punctually performed.

I cannot overlook this opportunity to register the hope that the railway industry will soon give increasing attention to three factors of travel interest, or comfort, which I believe have outstanding merchandising value, viz.:

1. *The "Astra-Dome" Car.*—Railways still fascinate millions of people; nearly every one is a "rail fan" at heart. They only need a spark to rekindle enthusiasm for trains. Everyone wants to ride a train that runs fast. Over past years and especially since coming to the Monon, I have frequently ridden on freight trains with friends not engaged in the railroad business. It is reassuring to see how eagerly they seek out a seat in the "gig top" of the caboose and how fascinated they are with watching the railroad from that advantageous elevation. The Astra-Dome feature of the car is a caboose "gig-top" de luxe, with the furnishings of a Park avenue pent-house. I would challenge the skeptic of this type of equipment to invite any one of his non-railroad friends to take a ride with him on the caboose of a fast freight train. Then let Mr. Railroad Officer observe the increasing fascination with which his guest follows the details of the ride from that box seat.

A Lure to Travelers

I am not unaware of questions about safety, clearances and encroachment on the body of the car, but I hope that these problems can be satisfactorily solved, because the Astra-Dome will provide the dash of interest and adventure that will keep many travelers on the rails who might otherwise go by air. The upper decks of the Fifth avenue buses in New York and the Michigan avenue buses in Chicago are the "Astra-Domes" of highway vehicles. Let doubting Thomases of the Astra-Dome reflect on the additional measure of interest to tourists which, aside from revenue considerations of increased capacity, follows development of that feature on those coaches.

2. *High-level station platforms.*—These devices are a boon to the average passenger and their introduction might be a partial offset to him for the inconvenience to which he is put by the long trains which are necessarily operated to provide the economic basis of low cost fares. High station platforms will reduce the time of station stops for loading and unloading passengers, and their cost should be considered in the same category as the economic value of schedule reduction from elimination of curves. It is recognized that at stations where trains must be switched, high level platforms may be inadvisable, but wherever practicable they should be given favorable consideration.

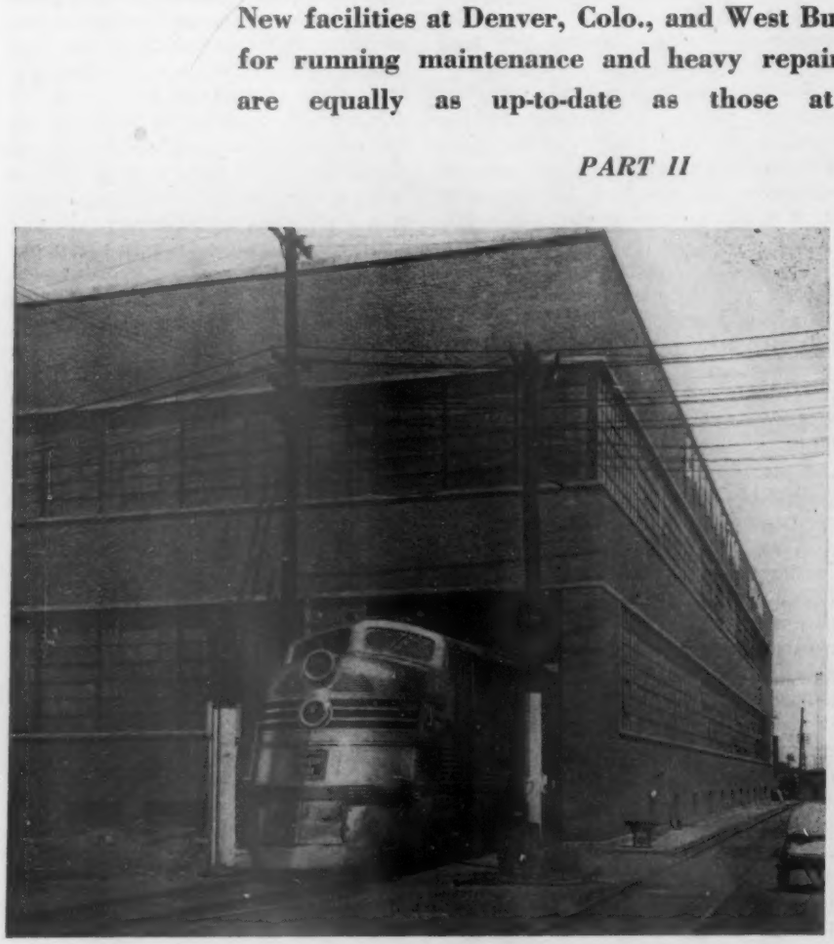
3. *Less Noise.*—One of the greatest advantages railroads have over other kinds of travel is their greater restfulness (if all goes smoothly, both literally and figuratively). Few things contribute more effectively to this attribute than freedom from noise. The reduction of travel dirt and noise was probably an even greater boon from air conditioning that the more obvious objective of temperature control in hot weather. Further

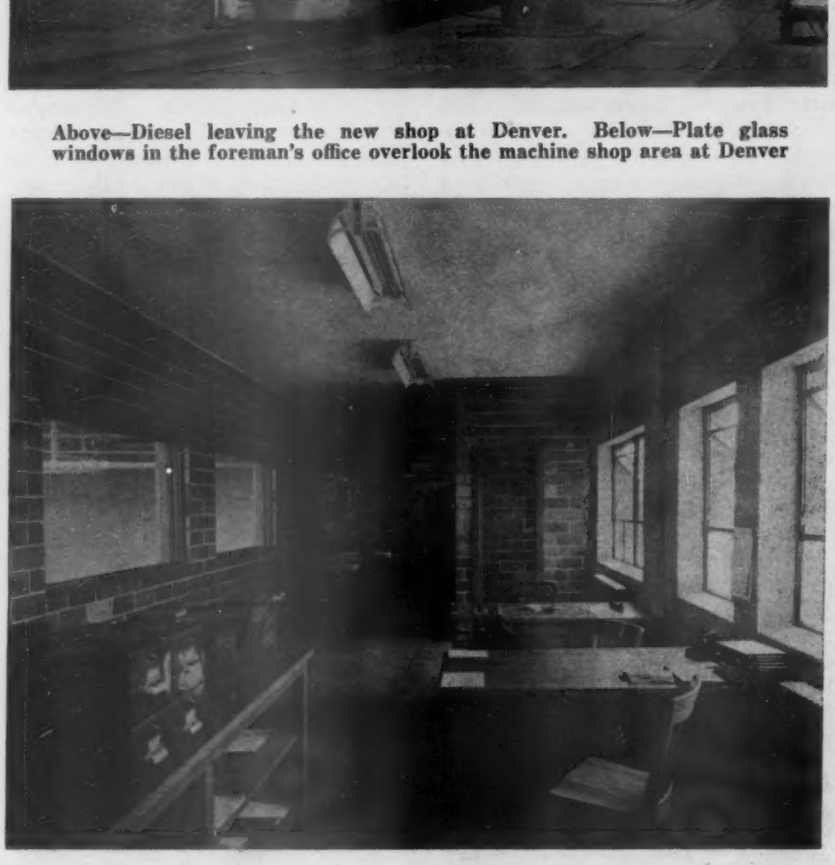
(*Continued on page 1049*)

Burlington Builds Three Diesel Shops

New facilities at Denver, Colo., and West Burlington, Iowa, for running maintenance and heavy repair, respectively, are equally as up-to-date as those at Clyde, Ill.*

PART II





Above—Diesel leaving the new shop at Denver. Below—Plate glass windows in the foreman's office overlook the machine shop area at Denver

THE new Diesel shop facilities completed recently by the Chicago, Burlington & Quincy at Denver, Colo., the western terminus of its main line to the West, are located directly at the road's steam locomotive terminal at that point. Designed for the running maintenance of both passenger and road freight Diesels, as well as the routine maintenance of Diesel switchers in the Denver area, the new facilities include a modern maintenance ship, a two-story general service building, two washtables, a four-track Snowco sanding station, and a fueling station. To make room for these facilities the work also required the removal of nine stalls of the existing roundhouse, an oil house, and a wash and locker building, the latter facilities being incorporated in the new service building, which was made of adequate size to house them, as well as to provide ample space for new storehouse areas and offices for the shop supervisory forces.

The main shop building, a steel-frame, brick structure, with extensive areas of window sash, is a 72-ft. by 265-ft. structure, lying in a general north and south direction, with an irregular-shaped extension, 100 ft. long and approximately 50 ft. wide, at its southwest corner, used as a Diesel machine shop. In general type of construction this shop is similar to the new shop built at Clyde (Chicago), Ill., and it also incorporates the same general features as at Clyde, as shown in the accompanying plan, including depressed floor areas, working platforms at locomotive-floor height, long inspection pits equipped with de-icing machines, a Whiting drop table and pit, and modern lighting, heating and ventilation, as well as the employment of the principles of color dynamics in interior painting.

The Denver shop has one through and two stub service tracks, with continuous elevated working platforms between them, but with no such platforms along the side walls. These platforms are joined at their south ends around the stubbed end of the center track, and are connected by ramps to the depressed floor level beneath them. There is one short wheel-release track within the shop, served by the drop table, but, unlike

* Described in Part I of this article, which appeared in the December 14 issue.

the arrangement at Clyde, there are no truck and wheel storage tracks at the depressed floor level under the platforms. In lieu of these latter tracks, trucks and wheels are stored on a track 140 ft. long immediately west of and parallel with the shop, which is served by an extension of the drop pit outside the building.

The machine shop area has a foreman's office, 13 ft. by 35 ft., at mezzanine height, directly over an enclosed area of similar size housing a toilet and wash room, and a tool room. Among the equipment in the shop is a drill press, a hydro-press, a general grinder, a valve grinder, a buffer, two lathes, a bolt cutter, a shaper, a small and a large drill, a power hacksaw, a speed-recorder tester, and a one-ton electric hoist. The floor in this area, of reinforced concrete construction, is at the rail-head level of the service tracks.

The Service Building

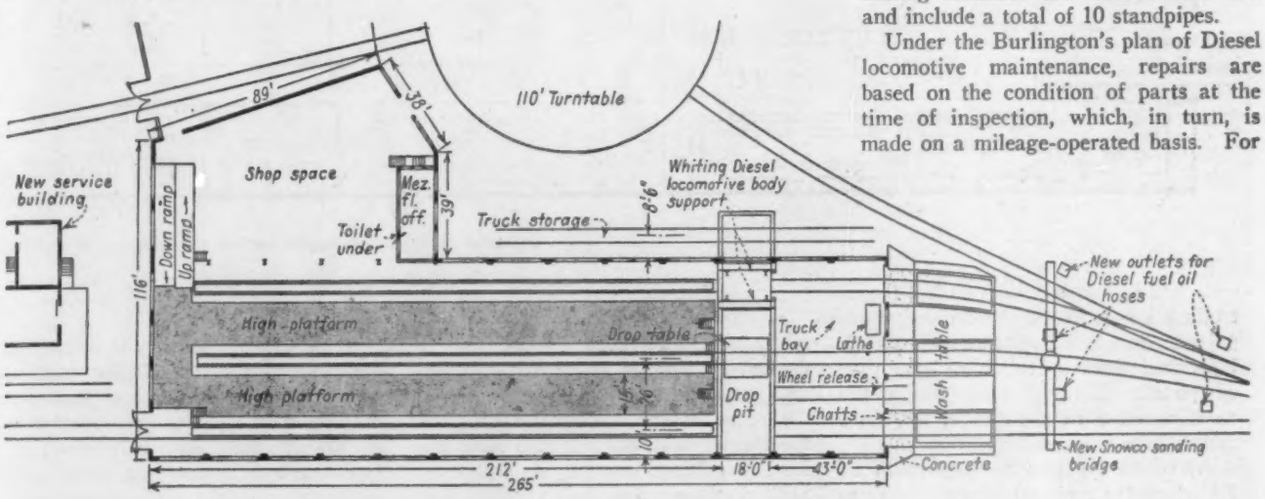
The new service building is located immediately south of the new Diesel shop and adjoins the north end of the existing Pullman and commissary building at the terminal. It is a two-story reinforced concrete and brick building, 45 ft. by 150 ft., underlaid with a full basement. The floors and roof are pan-type construction, the roof being protected with built-up tar-and-gravel roofing. An elevator with an 8-ft. by 10-ft. platform serves the basement and the two floors. A concrete platform, 10 ft. wide, served by a spur track, extends along the full length of the building on the east side, and a short platform is available at the north end for truck deliveries.

The south half of the first floor is assigned to the stores department and includes a 20-ft. by 25-ft. receiving room, a 14-ft. by 27-ft. commissary storage room, and an office 20 feet square, besides space used for the storage of small parts, the elevator and a stairway. The north half of the first floor is occupied by a 20-ft. by 76-ft. oil room, a coach yard and roundhouse office, a general foreman's office, a stair hall, and an engineers' registry office. The second floor is used entirely for a wash and locker room for the terminal employees, as well as for enginemen and dining car department employees. All of the basement is used for storage purposes.

There are three reinforced concrete washtables located just north of the main shop, one on each of the three tracks entering it. These tables are 13 ft. wide, with concrete aprons connecting them between tracks. The tracks are constructed through the table area with short wooden ties bolted to the concrete, and with the rails seated on standard tie plates and held in place with standard cut spikes.

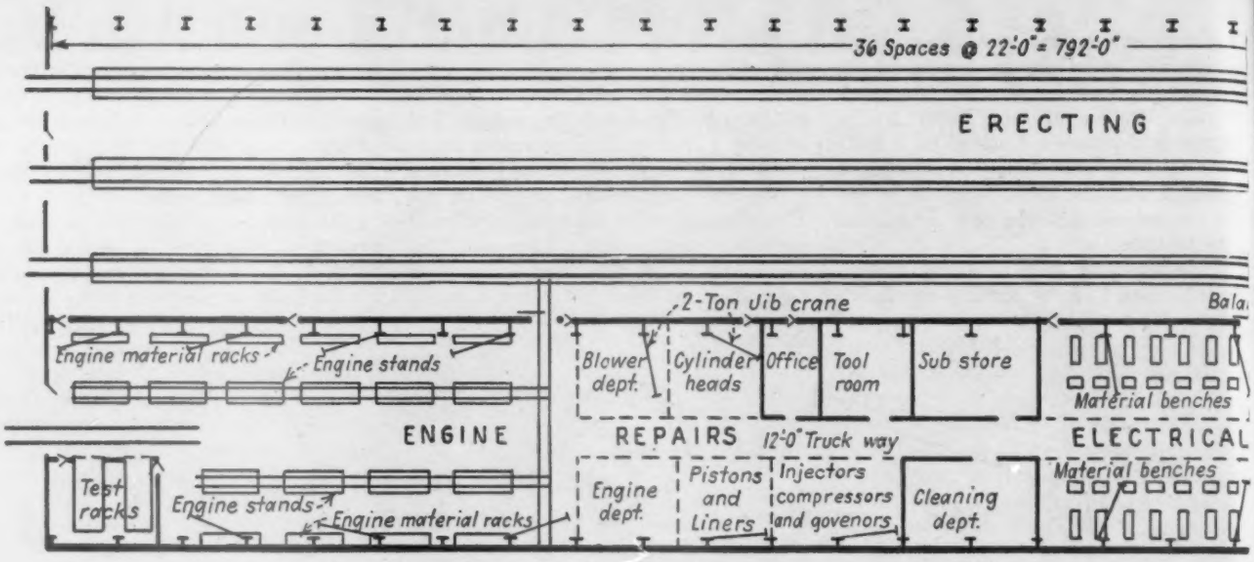
The new four-track Snowco sanding station at the shop is located 20 ft. north of the washtables and serves all three tracks entering the shop, as well as a track leading to the turntable. The fueling facilities are located here also and include a total of 10 standpipes.

Under the Burlington's plan of Diesel locomotive maintenance, repairs are based on the condition of parts at the time of inspection, which, in turn, is made on a mileage-operated basis. For example, pistons, liners, cylinder heads, and valves on road Diesels are changed out as determined by their condition when inspected, and traction motors, when new, are changed after the first 150,000 miles, and then at every 200,000 miles thereafter. On the other hand, in the case of switching Diesels, their pistons, liners, bearings, etc., are inspected at the time of annual inspection and, if in good condition, are not changed. Charts, as well as other rec-



General plan of the new Diesel shop at Denver

Drop pit and body supports at the Denver shop



General plan of the south bay of the shop at West Bur-

ords, aid in keeping record of and controlling inspections and all types of repairs made to each unit, and show each individual work operation and the time completed. Through such charts, the work is done in the proper sequence and is fully coordinated.

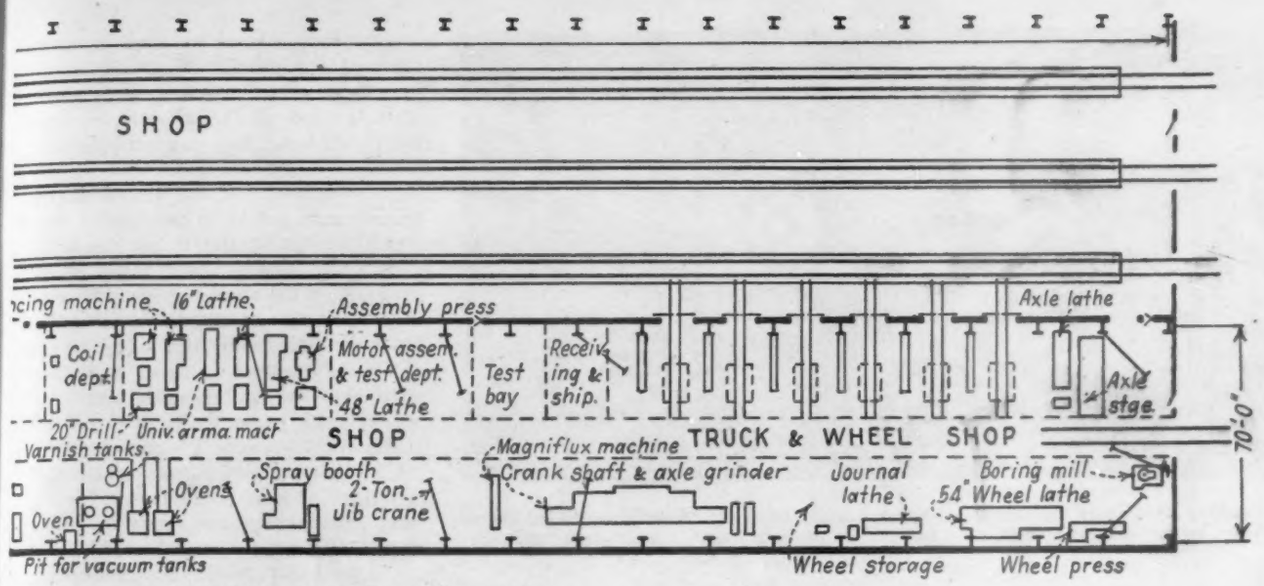
All of the types of Burlington-owned Diesel power undergo heavy repairs at the new shop facilities at West Burlington, Iowa, which were provided by remodeling and refitting a portion of the existing steam locomotive general repair shop at that point. The locomotive shop, as a whole, which lies in an east-west direction, covers an area 310 ft. wide and 792 ft. long and consists essentially of four bays extending the full length of the building. The largest and highest bay is the erecting shop, which is flanked on its north side by two 70-ft. machine-shop bays, which are separated from the erecting bay alone by longitudinal lines of columns, which are on 22-ft. centers in each line. On its south side the erecting shop bay is flanked by another 70-ft. bay, formerly used as a dismantling shop, which, in the recent work, was walled off from the shop proper to form the new area for heavy Diesel repairs. As now operated, the locomotive shop at West Burlington handles both steam and Diesel repairs, steam repairs being handled in the erecting bay, together with the two modern bays to the north, with the Diesel repair operations confined to the erecting bay, as necessary, and the completely walled off south bay.

Erecting Shop Bay

The erecting shop bay is 100 ft. wide and approximately 52 ft. high to the underside of roof trusses. It is served by three through tracks on 30-ft. centers, each with a continuous inspection pit 764 ft. long. These tracks are used in common by both steam and Diesel locomotives, with no particular track assigned solely to one class of power, and are served by a 250-ton overhead traveling crane, which, insofar as Diesel work is concerned, is used not only for the removal of trucks, but also for the setting in and out of main Diesel engines and generators and for transferring them and other parts to and from the Diesel shop bay. Aside from relaying the concrete floor in the erecting shop and renewing the doors in the end walls, no major changes were made to this bay when developing the new Diesel repair facilities.

The work involved in adapting the south bay—792 ft. long, 70 ft. wide, and 31 ft. high to the underside of trusses—to the repair of Diesel locomotive units included primarily the construction of the previously-mentioned partition wall between this bay and the

The Diesel heavy-repair shop is located in the near, low bay of the road's locomotive shop at West Burlington, shown above



lington as adapted to heavy Diesel locomotive repairs

adjacent erecting bay; the removal of the old concrete floor and such trackage as existed in the bay; the replacement of the windows in the south-side wall with large areas of glass blocks; the construction of several brick partition walls to form five rooms, with ceilings of concrete, at a height of 14 ft.; the placing of numerous foundations to support new machinery and equipment to be installed for Diesel repair operations; the laying of a new concrete floor throughout the bay; and the installation of new heating and lighting facilities.

From a repair-operations standpoint, the Diesel shop is divided into four sections, each suitably equipped for the classes of work to be carred out in it, and an existing 15-ton overhead traveling crane provides lifting service for all sections. Starting at the west end, the first eight panels of floor area between columns are assigned to engine repairs, including inspection, dismantling, complete overhauling, repairing and testing. The adjoining seven panels are assigned as an auxiliary engine-repair section, and provide an office, a tool room and a sub-store area. The next 11½ panels are designated as the electrical shop, and the last 9½ panels are assigned to truck and wheel repair. No barriers of any kind separate the various sections, and all of them are served by a 12-ft. truckway which extends longitudinally throughout the center of the bay.

The engine overhaul section is equipped to permit the dismantling, re-

Looking east in the West Burlington shop. Note 12-ft. truckway kept open to facilitate the distribution of parts to the proper work areas

Looking west from the truck and wheel section of West Burlington Diesel shop. The large machine left of center is a crankshaft and axle grinder

pair and assembly of engines. In addition to being served by a track entering through the west-end wall and extending 50 ft. into the bay, this section is equipped with two narrow-gage, engine-stand tracks, one on each side, which are joined through turntables at their east ends to a transverse narrow-gage track which projects into the erecting shop, under the working area of the heavy-duty traveling crane in that shop. Other facilities in the engine-overhaul section include a series of eight 1½-ton jib cranes, with 20-ft. booms, arranged to serve the various engine-stand locations in dismantling and assembly operations, and a fully enclosed, specially ventilated engine testing room, 10 ft. by 22 ft., equipped with two test racks.

Engine Repair Sections

In the adjacent auxiliary engine-repair sections the work handled includes the inspection and repair of cylinder heads, pistons, liners, pumps, injectors, governors, air brakes and other engine parts. Here, also, filters are cleaned and repaired, and for this purpose a large room is provided, furnished with cleaning, rinsing and oil-bath vats and an oven. Three other rooms, as already mentioned, are provided in this area—a tool supply room, a store room, and an office for the Diesel foreman and the electrical foreman.

The electrical shop adjacent to the east is completely equipped to handle the inspection, overhauling, rewinding, varnishing and repairing of motors and generators, and the repair of all other locomotive electrical parts. The westerly end of this shop is equipped with numerous work benches, a small emery grinder, varnish tanks, impregnator tanks, and ovens, while the easterly end, which is used as an electrical machine shop, is furnished with a power drill, an emery grinder, two dynetric balancing machines, a banding machine, a large and small lathe, an assembly press, and the necessary material racks. This end also provides space for the dismantling, assembling and testing of motors, generators, and their parts, and for this work is equipped with a bench magnetizer, a spark-gap tester, a spark-plug tester, several resistors, a number of small motors for operating power tools, and a spray booth. The entire electrical section is served by a series of 1½ and 2-ton jib cranes to aid in the various handling operations.

The truck and wheel shop at the east end of the Diesel shop bay is given over entirely to the servicing and repair of trucks, wheels and axles. Like the engine-overhaul section at the opposite end of the bay, this section is served by a 50-ft. length of track which extends into it from the east end of the building, and is also served by six transverse, standard-gage truck-repair tracks entering from the erecting shop.

One of the outstanding pieces of equipment in the truck and wheel shop—in fact, in the entire Diesel shop—is a crankshaft and axle-grinding machine, the foundation of which, alone, is about 60 ft. in length. This machine is located south of the center truckingway in the shop, which is also equipped with a 54-in. wheel lathe, a journal turning lathe, a 500-ton wheel press, a wheel boring mill, and a small emery grinder.

The area north of the truckway is occupied chiefly by the six transverse truck tracks, but it also provides space for an axle lathe, a small and two large emery grinders, material racks, and storage. Like the other working areas of the shop as a whole, the truck and wheel shop is equipped with several jib cranes for handling heavy parts and materials.

In the operations at the West Burlington shop, Diesel locomotives to be repaired are brought in on any one of the tracks of the erecting shop, where with the aid of the 250-ton overhead traveling crane they are stripped and dismantled in accordance with the repairs scheduled. If the Diesel engine unit or units are to be overhauled, they are lifted out by the crane and taken to a point directly over the erecting shop end of the narrow-gage transverse track serving the engine-repair shop. Here the unit being handled is placed on an engine-stand dolly, which is then rolled into the engine-repair section to be diverted to one of the engine-overhaul stand work locations.

Other parts of locomotives are handled in a more or less similar manner, being taken by the overhead crane to points where they can be moved readily into the various areas of the Diesel shop for further dismantling, repair and reassembly. As repaired, the various units or parts are moved back into the erecting shop adjacent to the wall separating this shop and the Diesel shop, where they are again picked up by the overhead crane and assembled on their respective locomotives. Frequently, to avoid tying up a locomotive, spare engine units, motors, generators, wheels and trucks are substituted for those removed from any particular locomotive, and the locomotive is put back into service as quickly as possible. Repair operations then continue on the equipment removed, which eventually becomes available for use on other locomotives as required.

Fuel and Oil Facilities

In connection with the new Diesel shop at West Burlington, new fuel and lubricating oil storage and delivery facilities have been provided, the fuel oil facilities being located immediately west of the shop and including a 20,000-gal. storage tank, a brick pumphouse 6 ft. square, and fuel unloading and loading apparatus. The new lubricating oil facilities, located in this same general area, include essentially a one-story brick pumphouse, 11½ ft. by 20 ft., and an adjacent concrete barrel-receiving platform, 20 ft. by 40 ft., together with the necessary pipe lines for distribution of the oil to using points in the shop.

The new shop facilities at West Burlington and Denver, as well as those at Clyde, described in Part I of this article, were designed and built under the general direction of H. R. Clarke, chief engineer of the Burlington Lines, and H. G. Dalton, engineer of structures, Chicago. The general contractor on the major building work at Clyde was the J. W. Snyder Company, Chicago; at Denver, the Mead & Mount Construction Co., Denver; and at West Burlington, Carl A. Nelson & Co., Burlington, Iowa.

Diesel-Electric Locomotive Maintenance

Many factors contribute to reduced maintenance costs, such as locomotive design, training of personnel, repair facilities, quality of fuel and lubricants, and the cost of parts*

By J. P. MORRIS

General Assistant, Mechanical
Atchison, Topeka & Santa Fe

THE first Diesel-electric locomotive was placed in service on the Santa Fe in 1935 and has been supplemented by additional locomotives until at the present time a total of 658,760 Diesel horsepower is in service. In addition to those in service, we have on order four 6,000-hp. passenger locomotives and four 1,000-hp. combination road switching locomotives from the American Locomotive Company and one 6,000-hp. passenger locomotive being built by Fairbanks, Morse & Co., which will give a total of 692,760 Diesel engine horsepower when those locomotives are placed in service. These locomotives were manufactured by seven different locomotive builders and consist of 25 different designs.

A Major Expense

Locomotive repair cost has been the major expense involved and it exceeds the cost of fuel and lubricants combined, inasmuch as 59.34 per cent of the expense mentioned was for repairs, 33.75 per cent for fuel, and 6.91 per cent for lubricants. Repairs for the Diesel engines required 54.64 per cent of the total money spent for repairs, the electrical equipment required 23.96 per cent and other parts of the locomotive, 21.40 per cent. Material costs amounted to 47.74 per cent of the total repair costs, and labor amounted to 52.26 per cent. (See Table I.) The switching locomotives had an average availability of 92.3 per cent and were utilized 93.8 per cent of the time they were available. The freight locomotives had an average availability of 87.4 per cent and were utilized 72.8 per cent of the time they were available. The passenger locomotives averaged 18,057 miles per unit per month.

The majority of the Diesel engine repair costs were caused by repairs to pistons, connecting rods, cylinder liners, cylinder heads, crankcases, crankshafts, and crankshaft bearings. The greater part of the electrical equipment repair cost was caused by repairs to the main generators and traction motors.

Routine preventive maintenance scheduled on a progressive basis has been utilized to keep the equipment in good operating condition and maintain maximum availability which is necessary in order to obtain minimum maintenance costs. The frequency for making the various inspections has been predicated on the requirements of the service and the performance of the locomotives. The cost involved for doing this routine work is only a portion of the total expense, inasmuch as failures of expensive pieces of equipment such as crankshafts, crankcases, traction motors, and main generators, necessitating removal for repairs, have caused maintenance costs to be greatly increased above what they should be. Since 1941, 18.9 per cent of the Diesel engines now in service have been removed for repairs due to damaged crankcases or crankshafts. Since 1942, 14.4 per cent of the main generators now in service have been removed for repairs due to defects. In 1944, 22.1 per cent of the traction motors in service were removed for repairs because of defects; in 1945, 30 per cent, and during 1946 up to August 1, 11 per cent. (See Table II.)

Table II—Defective Diesel Engines, Main Generators and Traction Motors Removed for Repairs —Expressed in Percentage:

Year	Diesel engines	Main generators	Traction motors
1942	4.8	....	....
1943	8.1	0.37	....
1944	12.1	5.9	22.1
1945	14.9	11.2	30.0
1946 (7 months)	18.9	14.4	11.0

NOTE—Figures given for Diesel engines and main generators are based on total of removals up to the end of the year shown. Figures given for traction motors are based on removals during each year.

Interruptions to the service caused by failures en route of the locomotive equipment have been quite evenly divided between the Diesel engine and the electrical equipment. Since January, 1938, 45 per cent of the failures have been chargeable to the Diesel engines, 47 per cent have been chargeable to the electrical equipment, and 8 per cent were chargeable to other equipment on the locomotives. (See Table III.)

An analysis of the operation of this fleet of locomotives indicates that equal recognition should be given to the Diesel engine and the electrical equipment for improving the operation and reducing maintenance costs. To reduce mainte-

Table I—Diesel Locomotive Costs for Repairs, Lubricants, and Fuel Expressed on a Percentage Basis

Type of locomotive	Repairs	Lubricants	Fuel	Total
Switching	6.74	0.46	2.59	9.79
Passenger	33.69	4.72	23.95	62.36
Freight	18.91	1.73	7.21	27.85
Total	59.34	6.91	33.75	100.00

Repairs

	Diesel engines	Electrical equipment	Other repairs	Total
Labor	28.85	12.92	10.49	52.26
Material	25.79	11.04	10.91	47.74
Total	54.64	23.96	21.40	100.00

Availability and Utilization of Switching Locomotives, Per Cent

	1941	1942	1943	1944	1945	Average
Availability	....	....	92.2	92.4	92.2	92.3
Utilization	....	....	96.8	95.7	89.9	93.8

Availability and Utilization of Freight Locomotives, Per Cent

	1941	1942	1943	1944	1945	Average
Availability	89.95	80.08	87.45	84.93	85.63	87.4
Utilization	66.23	73.39	75.95	76.85	71.79	72.8

Diesel Passenger Unit Mileage per Month

1941	1942	1943	1944	1945	Average
18,270	19,126	18,087	17,635	17,295	18,057

*A paper presented as a statement of the objective in a symposium on the subject of reducing Diesel-electric locomotive maintenance costs at the annual meeting of the American Society of Mechanical Engineers, Railroad Division, Hotel Pennsylvania, New York, December 4, 1946. Four additional papers commenting in detail on design objectives for reduced maintenance covered the Diesel engine, electrical equipment, chassis, running gear and accessories.

nance cost, consideration should be given to both existing locomotives and locomotives of the future.

Many expensive repairs and interruptions to the service are caused by man failures and in order to reduce these to a minimum it is necessary to have adequate and well trained supervision to instruct those who repair and operate the locomotives. Diesel locomotives are intricate machines consisting of thousands of different parts and it requires a considerable period of time to develop personnel to the degree where they are competent to supervise and instruct, repair or operate the locomotives in the proper manner. Past experience has indicated that supervision having only steam locomotive experience is not adequately qualified for economical use on Diesel locomotives without considerable special training. Details must be closely followed in order to detect impending trouble and corrections made before expensive repairs result. Adequate and well qualified supervision and instruction are a very important factor in reducing maintenance costs and are becoming more important every day because so many different types of locomotives are being placed in service.

Table III—Diesel Locomotive Failures

Year	Per Cent Chargeable to: Diesel engines	Electrical equipment	Other equipment
1938	52	38	10
1939	41	28	31
1940	21.5	57	21.5
1941	30	60	10
1942	38	48	14
1943	33	59	8
1944	53	44	3
1945	45	50	5
1938 to 1945 Incl.	45	47	8

Maintenance Facilities

It is essential that separate well-designed facilities be provided for Diesel locomotive repairs so that the work may be done efficiently and economically, in order that the highest availability can be attained. When planning new facilities for Diesel repairs an endeavor should be made to concentrate as much work as possible at the same point in order to utilize personnel and material more efficiently. An endeavor should also be made to utilize one of the greatest advantages the Diesel locomotive possesses, the ability of operating long distances between inspections, when determining where the facilities should be located and the number of facilities required. As the Diesel locomotive replaces the steam locomotive there will be steam-locomotive repair facilities which can be remodeled to handle Diesel repairs and there will also be steam repair facilities which can be abandoned if all the advantages of the Diesel locomotive are utilized. Proper utilization and design of maintenance facilities are an important factor in reducing maintenance expense.

Maintenance Schedules

The common practice in the past has been to handle maintenance work progressively in order to maintain high availability. The amount of work which is handled during any one detention is dependent on the time available and the size of the maintenance force. This method has been quite successful; however, as the size of the Diesel fleet increases at individual maintenance terminals it has been found advantageous to reduce the frequency of detentions for inspections and increase the number of inspection items handled at each detention for repairs. By handling in this manner there is a considerable saving in man-hours. However, it is necessary that the quality of the work performed be the best. As refinements are made in the locomotives and better parts become obtainable the maintenance schedules should be revised accordingly to take full advantage of the economies involved.

Fuel, Lubricants, and Water

Past experience has shown that certain qualities are necessary in fuel, lubricants, and water, and that when they are lacking the result is expensive maintenance of the Diesel engines. The demand for Diesel fuel is steadily increasing, resulting in a shortage of fuel possessing the qualities needed for good performance, and unless these can be provided it will be necessary to redesign existing engines so that they will be capable of using the type of fuel available without excessive maintenance. The same is true in the manufacture of new engines.

At the present time there are numerous types and kinds of lubricants in use on the Diesel locomotives which possess many good qualities and it does not appear that there will be any shortage of them in the future. However, the perplexing problem is that it is not recommended or deemed advisable to mix them in the same engine, which results in considerable confusion and expense where more than one type of lubricant is used, especially where permanent lubricating oil facilities are installed with numerous outlets. This is a serious problem and one which requires the combined attention of both lubricant and engine manufacturers to overcome. In the past it has been more or less common practice to change lubricating oil in Diesel engines at frequent intervals which has resulted in considerable expense. Experience to date has indicated this is unnecessary with some types of lubricating oils when proper filtration is provided and filter elements are changed at necessary intervals. Contaminated oil is detected by close supervision and careful inspection. This latter policy has contributed to reducing maintenance costs.

The average water available for use in cooling systems of Diesel engines and steam generators can not be used without causing difficulty and expensive maintenance and performance has indicated that treated water containing a minimum of total solids must be available. The treatment of water on individual locomotives is very difficult to control and can best be handled by providing wayside facilities for treating and storing the water. The use of properly treated water free of solids is an important factor in reducing maintenance costs.

Cost of Repair Parts

The cost of material for repairs amounted to 47.74 per cent of the total cost of repairs and I am of the opinion that you will agree that the material costs are too high if we are to maintain this type of power at a reasonable maintenance cost.

Consideration will undoubtedly be given by the railroads that have fine machine tools to engage in the manufacture and repair of equipment that can be handled in their present facilities, unless a substantial decrease can be effected by the builders.

When designing new locomotives the builders should give consideration to the standardization of parts insofar as possible, so that the railroads will not be required to make heavy investments in material stocks because parts are not interchangeable.

Load Factor

Power plants which are operated at high load factors require more maintenance than those which are not as heavily worked, and they are not as reliable. This has been particularly true of Diesel engines, main generators and traction motors, and has indicated that the locomotive performance, both from operating and maintenance standpoints, is considerably improved when using locomotives with sufficient capacity to allow operation at reduced throttle a portion of the time. Locomotives having this increased capacity are also sufficiently flexible to handle variations in schedules and train consists when they occur.

Diesel Locomotive Design

There are many changes and improvements which should be considered on both existing and new locomotives

to reduce maintenance costs. Some of these are:

1.—Reduction of the number of power plants comprising the locomotive in order to reduce the number of parts involved.

2.—Interchangeability of parts by standardizing on necessary dimensions.

3.—Ample reserve capacity built into the power plant to allow for more reliability.

4.—Application of adequate filtering capacity in the lubricating-oil system to maintain the oil in good condition without frequent filter changes.

5.—Use of crankshaft bearings which will be more dependable and give longer life.

6.—Filtration of all air entering the engineroom and power-plant equipment by application of filters to the car body.

7.—Use of stainless steel on locomotive car body to eliminate repainting expense.

8.—Use of oil lubrication in traction motor armature bearing, to insure proper lubrication.

9.—Use of felt-wick oilers instead of wool packing in traction-motor suspension bearings to obtain better lubrication and simplify the packing procedure.

10.—Additional refinement of traction motors and generators in order to obtain greater dependability and longer life between rewinds.

11.—Application of automatic protection on Diesel engines fully to protect the engine from excessive cooling—water temperatures and low oil pressure.

12.—Use of completely enclosed relays to prevent dirt interfering with operation of controls.

13.—Improvement of brush life and commutator conditions on main generators and traction motors to obtain at least one year's service between renewals.

14.—Improvement of cylinder wear by use of chromium plating or other means to secure longer cylinder life and eliminate use of oversize parts caused by reboring.

15.—Development and application of automatic devices to prevent damage to generators and traction motors due to overload.

16.—Use of fully automatic transition to eliminate failures of electrical equipment due to improper manipulation of the controls by the operator.

17.—Use of lubricating-oil pumps on Diesel engines having ample reserve capacity.

18.—Construction of cooling systems having ample capacity and designed in such a manner that the hazard of water leaking into the lubricating oil is reduced to a minimum.

19.—Elimination of moisture and oil from air compressor entering the air equipment.

20.—Application of barring-over devices to Diesel engines designed for one man operation.

21.—Lubricating oil and water circulating passages built in as an integral part of the engine with suitable inspection and clean-out openings at proper intervals to eliminate piping.

22.—Utilization of simple arrangement for attaching cylinder heads to cylinder blocks using moderate sized attachments to eliminate fatigue of workmen in applying and removing heads and also in order to reduce the expense of labor in performing this operation to a minimum.

23.—Provide for accessibility at the flywheel and of the main generator for cleaning and maintenance.

Other important factors which should receive consideration when new designs are contemplated and which are important from an economic standpoint to the railroad even though they do not reduce maintenance cost of the locomotives include the following:

(1) Adequate fuel and water capacity built into the locomotive to reduce wayside servicing facilities to a minimum on long-distance runs; (2) proper distribution of weight and selection of wheel diameters for reducing shear stress below 67,500 lb. and preventing shatter cracking of rails at high speeds; and (3) application of increased-capacity dynamic brakes to minimize the use of air brakes on train and reduce wheel removals on account of overheating from brake shoes.

The Diesel-electric locomotive is the most valuable and expensive tool ever placed in the hands of railroad men and its use and well-being must be carefully supervised and controlled.

Travel Test Should Omit No Essentials

(*Continued from page 1041*)

reduction of noise which reaches the traveler should receive study to eliminate all that does not originate inside the car and that which does should be deadened as completely as possible.

Railroads have to run long trains if they are to produce low-cost transportation. But some of the inconveniences to passengers which long trains tend to entail should be avoided, lest the customers make common cause with the brotherhoods in their quest for an interdict against trains longer than some arbitrary maximum. For one thing, platforms ought to be long enough to accommodate the longest trains regularly operated, so patrons will not have to shuffle through adjoining cars to make their exit; and permit them to avoid the even less desirable alternative of stumbling over ties and switches between the luxury of the cars they have left and that of the modern station building which is their destination.

The movement in passenger-carrying cars of hand baggage not actually needed by patrons en route is the source both of delay and inconvenience—and is occasioned by the unsatisfactory service afforded by head-end baggage facilities. A passenger would usually prefer to sit on his excess luggage when he travels, rather than to have it follow him on a slow train with time of arrival uncertain. If arrangements were made to relieve the passenger of heavy baggage right at the entrance of the station so red-cap service would not be needed—and if the passenger knew, not only that his bags would go forward by the same train that he does but also that he could get access to them at any time en route, all incentive to the patron to keep his effects constantly under his eye would disappear. And, of course, prompt delivery of checked baggage to the station exit—in a time no longer than needed for the passenger himself to reach that point—would also be a necessary part of such a plan.

The railroads have been going through a major transition under the impact of new rivals. However, there are other industries which have been challenged by a major external competitive threat and have met the test so successfully that they have gone on to higher levels of usefulness and profit.

Recently I happened to be in French Lick Springs (a Monon resort which I hope you passenger traffic men will select for some future meetings in order to give us an opportunity to show you our railroad en route), with a group representing an industry which had successfully surmounted severe commercial problems of its own. It was significant that the major address to its convention by one of its leaders was "Sell or go bust". If the railroads will make that idea their watchword, it will insure their success, for when they become Merchants of Speed they will be the Masters of Transportation.

PENNSYLVANIA OFFERS NEW FILM—A new sound film, "Clear Track Ahead!", telling the story of railroad transportation from the days of the "John Bull" locomotive of a century ago to the streamlined steam, electric and Diesel engines of the present, has been completed and is now available through the Pennsylvania without charge for showing to schools, churches, service clubs, and other organizations.

"Clear Track Ahead!" runs approximately 25 minutes in its 16 millimeter form. It may be booked for showings anywhere in the United States through G. E. Payne, system publicity representative of the Pennsylvania, Room 1587 Broad Street Station building, Philadelphia 4, Pa.

Milwaukee's Safety Shoe Car Begins Tour

To encourage the wearing of shoes that provide adequate toe protection, road inaugurates traveling "toe protection store" to supply "on-the-job sales service" for all employees

THE old proverb—Mohammed must go to the mountain if the mountain will not come to Mohammed—has been revived and aptly demonstrated by the Chicago, Milwaukee, St. Paul & Pacific through the inauguration of a new service designed to carry safety shoes to all parts of the system. This new service features "toe protection" and was brought about to give all employees an opportunity to purchase these specially-constructed shoes, which have steel caps built into them to protect one's toes against objects rolled or dropped on them.

For many years the Milwaukee has offered its employees an opportunity to buy safety shoes through a payroll-deduction plan. However, some employees neglected to take advantage of this service because of the inconvenience encountered in visiting the local storehouse to make their purchases. To further encourage the wearing of these shoes and to make their acquisition more convenient for its employees, the railroad began operating a safety shoe car on June 24, 1946. This innovation was sponsored by L. J. Benson, assistant to vice-president, in charge of the safety division, and is intended to provide an opportunity for employees over the entire Milwaukee system to inspect and, if they desire, purchase the shoes with the least inconvenience.

An analysis of Milwaukee toe injury statistics over a period of several years reveals that toe injuries increased in direct proportion to the decrease in the sales of safety shoes. These tabulations show that, during 1944, the Milwaukee sold 8,873 pairs of safety shoes to employees whose work makes them most likely to encounter accidents of this type. During the same year, 241 toe injuries were reported. During 1945 shoe sales aggregated only 7,945 pairs, and toe injuries increased to 274—a drop of 10 per cent in safety shoe sales, and an increase of 14 per cent in toe injuries.

A further study of the toe injury statistics reveals that, during 1945, safety shoe sales to employees in the bridge and building department dropped 17 per cent, and that at the same time toe injuries jumped 67 per cent. According to the accompanying table, station and freight house employees are most likely to encounter this type of accident, with track workers following closely. Combined, the employees of these two departments sustained 55 per cent of the toe injuries reported on the system during 1945. However, it will be noted that no department has a perfect record in this respect, and for this reason, all employees engaged in any type of work where the possibility of toe injury exists, are urged to wear safety shoes while on duty.

The mobile safety shoe salesroom is an old passenger car (purchased in 1901) with wooden superstructure and a steel center sill, rebuilt at the company's Milwaukee, Wis., shops. As restyled, the 60-ft. car presents an attractive appearance.

Approximately one-fourth of the space in the car is occupied by a fitting room, while the remainder is given over largely to a shoe storage room. Fixtures in the fitting room include a wood bench, with cast iron base and arm rests, which comfortably seats six people; one desk; two fitting pedestals; one foot-measuring device to assure a correct fit; and one display rack, 15 in. wide and 6 ft. long, where the various style shoes are displayed.

The wood floor in the fitting room is carpeted; the end and side walls support posters dealing with the prevention of toe injuries and generally stressing the importance of accident prevention. To assure reader attention, these posters are changed every six weeks.

The fitting room is equipped with two 48-in. fluorescent lighting fixtures.

Left—Interior view of the Milwaukee safety shoe car illustrates the neat and compact arrangement. Above—Large shoe storage racks are designed to permit the storing of all sizes of a particular style shoe—eliminating excess walking

Heat is provided by two coal stoves, one located in the fitting room and the other at the far end of the shoe storage room.

The storage room provides space for approximately 4,000 pairs of shoes. The stock is neatly displayed in specially-built wood racks, placed against the outside walls and through the center, with aisle space on each side of the car, permitting easy access to any size shoes desired.

The racks fastened to the outside walls consist of 12 section, while those in the center contain 11. Dress shoes are stored on one side of the stockroom and work shoes on the other. The bottom sections of the racks are 30 in. high, and were constructed to afford ample storage space for protective stock, used to replenish the stocks in the other sections.

Each section of the storage racks is designed to carry all sizes of a particular shoe style. To facilitate the servicing of employees, and to simplify handling on the part of the fitter, single pairs of shoes of each style and size in widths A, B, C, D, E and EE, are stored nearest the fitting room, and this working stock is replenished from the storage racks at the far end. To please all tastes, the car stock comprises nine different styles.

The personnel of the car consists of a qualified shoe fitter and one helper. Through the shoe fitter, or salesman, who has had many years experience in fitting shoes, employees are assured properly fitted shoes that will give comfortable service.

New Method Increases Sales

In its initial tour of Milwaukee, Wis., begun on June 24, the shoe car serviced employees at the Milwaukee car shops, freight house No. 7, coach yard at 6th Street, freight house No. 11, Davies freight yard, and the Milwaukee locomotive shops, the foundry and several stores department locations. During the tour of these points, 305 pairs of shoes were sold, compared with an average of 124 pairs each month prior to the inauguration of the new service.

Upon completion of its tour of the Milwaukee district, the car was transferred to Chicago on August 9, where its first stop was the Galewood freight house. Next, it was moved to Bensenville yards, Mannheim yards, and then to the Western Avenue yards, where it served employees in the roundhouse, car repair shops, stores department, bridge and building and the section forces. The present schedule calls for the car to remain in the Chicago district until it has made a complete tour of all working points.

Shoe Sales and Toe Injuries

Department	Injuries 1944	Injuries 1945	Injuries Per cent + or −	Sales 1944	Sales 1945	Sales Per cent + or −
Car	28	39	+ 39	1,065	1,243	+18
Locomotive	27	38	+ 41	2,630	2,493	− 5
Track	60	66	+ 10	2,731	2,289	−16
B. & B.	3	5	+ 67	248	206	−17
Sta. & Freight Houses	82	84	+ 2	776	515	−34
Enginemen	3	3	0	96	66	−31
Trainmen	20	19	− 5	615	482	−22
Stores	16	10	− 38	641	555	−13
All others	2	10	+400	71	96	+35
Totals	241	274	+ 14	8,873	7,945	−10

Provides Additional Service

An indication of the interest created by this new car is the fact that while during May, before the car was put in service, safety shoe sales totaled but 113 pairs in the Chicago district, during the first month of the car's stay there, sales mounted to 331 pairs.

The service rendered by the shoe car is not intended to interfere in any way with the established custom of many employees of buying their safety shoes from the nearby storehouse. Instead, the car is intended to supplement the efforts of the storehouse to provide all employees a convenient opportunity to make purchases.

The car's visit to the Union Street and Kinzie Street freighthouses, Chicago, makes it possible for most of the station and freighthouse employees in these territories to visit the car and purchase safety shoes on company time. Upon the completion of its tour of the Chicago district, it is planned to send the car over the entire Milwaukee system — from Westport, Ind., to the Pacific coast, embracing 10,733 miles of lines. This blanket coverage of the entire railroad will give every one of the employees of the road an opportunity to participate in an extensive campaign to reduce, and, if possible, eliminate, toe injuries, while at the same time assuring themselves of quality merchandise at a reasonable price.

While sponsored by L. J. Benson, assistant to vice-president, in charge of the safety division, the plan of bringing "toe protection" to all Milwaukee employees is under the direct supervision of J. V. Miller, general storekeeper at Milwaukee. These men, with the cooperation of the Safety First Shoe Company, Holliston, Mass., are responsible for the success this modern merchandising method has achieved.

The exterior of the shoe car presents an attractive appearance. The "Toe Protection Store" sign has tended to make the employees more safety shoe conscious

Chief Executive of the A. A. R.

Robert Virgil Fletcher

Judge Robert V. Fletcher, who has been acting president of the Association of American Railroads since the death of John J. Pelley on November 12, has been elected president of the Association, having agreed to serve until a permanent successor to Mr. Pelley can be found—as was noted briefly in last week's *Railway Age*. Judge Fletcher was born on September 27, 1869, in Grant county, Kentucky, and is an alumnus of the University of Mississippi.

He was admitted to the bar of the state of Mississippi in 1899 and was a justice of the supreme court in that state in 1908-09. From 1911 until 1933 he served in the law department of the Illinois Central, being advanced to the post of vice-president and general counsel, which he relinquished in 1933 to become vice-chairman and general counsel of the Association of Railway Executives. From the inception of the Association of American Railroads in 1934 he was vice-president in charge of its law department until 1944, when he became vice-president in charge of research, a position which he held until he became acting head of the association on Mr. Pelley's death.

Brake Cylinder Release Valve

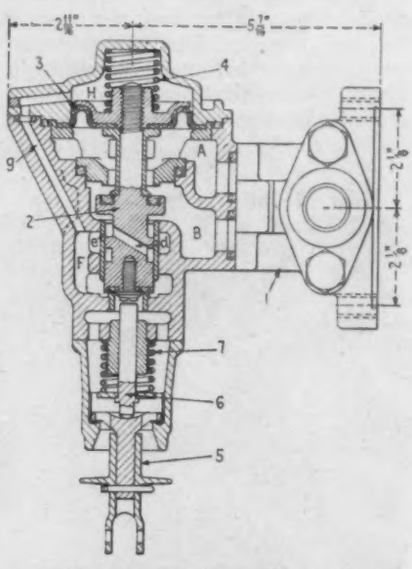
To lessen the time consumed in draining the air from the reservoirs and brake cylinders prior to switching present-day freight cars equipped with AB brakes, the New York Air Brake Co., 420 Lexington avenue, New York, has developed a brake cylinder release valve which saves time in two ways.

Instead of having to hold open the release valve, which is part of the AB control valve, during the entire interval required completely to drain the brake system, with this new release valve it is necessary only to make a brief pull on the release rod.

This pull serves to cut off the supply of air to the brake cylinder and to drain it without further attention. Thus the overall time required for bleeding cars is little more than that required to walk the length of the string of cars.

Savings in both time and air are effected when recharging the system since this release valve retains the charge in the reservoirs when it releases the brakes.

Referring to the sectional view of the brake-cylinder release valve, during



The brake-cylinder release valve

applications of the AB brake, air is free to flow from the AB control valve through bracket *1* into chamber *A*, past valve *2* and out to the brake cylinder through chamber *B* and the brake cylinder connection to the bracket. At the same time air also flows from chamber *B* through annular drilled ports *e*, chamber *F* and passage *g* into chamber *H* where it exerts pressure on diaphragm *3* to assist spring *4* in holding valve *2*

NEW BOOK . . .

Car Builders' Cyclopedia, 1946 Edition. Published by the Simmons-Boardman Publishing Corporation, 30 Church street, New York 7. Compiled and edited for the Association of American Railroads, Mechanical Division. 1,444 pages. Price, $6.

This seventeenth edition of the Car Builders' Cyclopedia of American Practice follows the general arrangement of editions since 1922. Each of the 20 sections is clearly defined.

Changes have been made in order to make the material more readily accessible. This edition contains a completely new section on car-shop layout and operation; wheel-shop design, equipment, and operation; material handling; welding, and other phases of passenger- and freight-car maintenance.

The Table of Contents by sections and subdivisions and the General Index to Car Parts and Products at the end of the book have been amplified, and a summary of the contents precedes each section. The book contains a dictionary of car terms, typical illustrations of railroad and industrial cars, their parts and equipment, and data on cars built in America for export.

on its lower seat against the pressure in chamber *A* on the other side of the diaphragm. In releasing the brake the air is free to flow in the opposite direction so that the brake functions normally.

When a car is to be prepared for switching the brake pipe is exhausted, applying the brakes in emergency or full service so that the chambers and passages in the release valve are charged to brake-cylinder pressure. A pull on release valve handle *5* lifts plunger *6* against the tension of spring *7* to push valve *2* off its lower seat and close communication through ports *e* from chamber *B* to *F*.

Chambers *F* and *H* are quickly exhausted to the atmosphere through the lower valve seat and brake-cylinder pressure in chamber *A* acting on the diaphragm forces valve *2* to its upper seat, closing communication between the control valve and the brake cylinder. The release valve is then set and requires no further attention. With valve *2* in its upper position passage *d* connects chamber *B* and the brake cylinder to the atmosphere through ports *e*, chamber *F* and the lower seat.

Since the AB control valve is in full service or emergency position, chamber *A* is connected to one or both of the reservoirs so that the release valve will remain in this position until brake-pipe pressure is restored to return the control valve to release position. When this is done chamber *A* is exhausted through the control-valve brake-cylinder release ports and spring *4* returns valve *2* to its lower seat, restoring the normal functioning of the brake system.

This brake-cylinder release valve is designed to be installed on its own pipe bracket in the line between the AB control valve and the brake cylinder. No other pipe connections are required with this arrangement.

Governor Arnall and the Railroads

Governor Ellis Arnall of Georgia, whose new book "The Shore Dimly Seen" has recently appeared, is counsel of record for the state of Georgia in the anti-trust suit brought by that state and now pending in the Supreme Court of the United States against the major railroad systems of the North and East, as well as of the South.

In his book Mr. Arnall now appeals his case to the public. He argues in the forum of public opinion the facts and law of the case, which neither the court nor its special master, Dean Lloyd K. Garrison, has yet had time to pass upon. Under these circumstances, it is not only appropriate but imperative, in the public interest no less than in the interest of the defendants, that they should also be heard before the forum to which Mr. Arnall has now taken the case.

There is a double reason for presenting the facts which Mr. Arnall, as a result either of enthusiasm or carelessness, states erroneously. The first is that his book is being received by many well-meaning people as a sincere manifesto of constructive liberalism. The second is that in the field of law upon which Mr. Arnall has embarked his state, facts are all-important in determining the legality or illegality of the conduct of the parties. If, therefore, his statements of fact were in all points correct, a basis would be laid for the judgment of condemnation which he asks public opinion to pass against the railroads. He is not entitled to such a judgment, because he is wrong in his facts—on each and every one of the major premises upon which he bases his case.

First, Mr. Arnall is wrong in asserting that the state of Georgia or the South is prevented by railroad rates, or otherwise, from becoming industrialized.

Second, Mr. Arnall is wrong in stating that the rates on manufactured articles produced in the South and shipped to the markets of the North are uniformly less favorable than those from northern producing points.

Third, Mr. Arnall is wrong in asserting that the Interstate Commerce Commission has "missed its opportunity" and turned a deaf ear to the South by refusing to lower rates from the South to the northern markets.

Fourth, Mr. Arnall is wrong in asserting that the northern railroads have insisted on higher rates from southern than from northern producing points.

Fifth, Mr. Arnall is wrong in asserting that the alleged railroad conspiracy to keep Georgia and the South from becoming industrialized has been carried on through the various rate bureaus at New York, Chicago and Atlanta.

Sixth, Mr. Arnall is wrong in his reference to what he calls the "mysteries of transportation gibberish" and in asserting that they can be eliminated from railroad rate-making. The complex requirements of the Interstate Commerce Act make necessary what he erroneously calls "rate gibberish."

Finally, Mr. Arnall is wrong in what he says about the Association of American Railroads. He merely echoes ancient shibboleths when he asserts that it is a monopolistic and conspiratorial scheme invented and dominated by Wall Street bankers.

A basic defect of Mr. Arnall's argument is that he writes on the evident assumption that a railroad rate is comparable to the retail price of an article like a bag of peanuts or a stick of candy. He, therefore, ignores — doubtless because he fails to understand—the necessity of consultation, conference and discussion before the new railroad rates are filed with the commission. Without conferences, rates could not be made by the railroads. They would have to be all dictated by the government through the Interstate Commerce Commission or some other bureau.

In the end, Mr. Arnall's argument brushes the facts aside and comes down to a familiar pattern of abstractions. It is a simple pattern which runs in substantially the following mold: Certain court decisions have popularized the notion that conferences and discussions between competitors are violations of the antitrust laws. The public also knows that monopolies are violations of the antitrust laws. It is, therefore, easy to leap to the conclusion that wherever there is conference there is monopoly.

Following this pattern, Mr. Arnall is free to show the existence of a railroad monopoly by simply pointing to the rate conferences. Having proved the existence of a railroad monopoly in this easy way, it then becomes appropriate for him to decorate the picture by pointing to the Association of American Railroads and to cast the evil odor of monopoly on the doings of the railroads in general.

In the last analysis, what Mr. Arnall is attacking is unified national transportation over the railroads. To have this kind of nation-wide railroad movement requires much machinery for negotiation and arrangement between the separate lines. This produces an aspect of "bigness," and Mr. Arnall attacks it on that ground. It may well be that "bigness" is bad, but whether it is or not, shippers should certainly not be required to go back to the days when they could not consign freight beyond the terminus of a single railroad.

Much has been said by reviewers in praise of the literary flavor of Mr. Arnall's book. Thurman Arnold extols it as a "literary classic"; Drew Pearson as a "brilliant, human document." It is praised by Assistant Attorney General Wendell Berge as a "superlative statement of the credo of liberalism," and by Henry Wallace as a combination of "Thomas Jefferson and Andrew Jackson brought up to date." It is possible that these commendations may be merited. It is disappointing, however, that there should be presented by a lawyer as a worthwhile contribution to political thought an argument which ignores the facts and resorts to the manipulation of a series of empty and rather dusty abstractions, none of which are novel or fruitful or in conformity with realities.

—Excerpts from a communication to the editor of the Washington Post, from John Dickinson, vice-president—general counsel of the Pennsylvania.

GENERAL NEWS

Fletcher Hopes for Successor by March 1

A.A.R. head says organization more active in research than ever before

R. V. Fletcher, whose election on December 12 as president of the Association of American Railroads by the organization's board of directors was reported in last week's *Railway Age*, described himself as only an interim president.

"I have been put in as a stop-gap until they get another man," he told reporters. "My term of office will conclude when a satisfactory successor to [the late] Mr. Pelley is found. I hope that by March 1 someone else will be selected and installed as the new president. We face a period in the railroad world when we need young, vigorous people."

Meeting in New York, the directors of the association released a statement acknowledging the receipt of letters from the Chesapeake & Ohio, the Pere Marquette and the New York, Chicago & St. Louis which expressed a desire by these roads to withdraw from the A. A. R. but to continue their connection with several of the association's activities.

"The board expressed willingness to discuss with the railroads concerned a proper basis on which this might be done," the statement continued, adding that the activities with which the C. &. O. and its related roads wish to continue their association are the car service and per diem agreements, the interchange rules governing freight and passenger cars, the work of the A. A. R.'s Mechanical and Car Service divisions and its Bureau of Explosives and the railway accounting and freight claim rules.

Judge Fletcher, in his report for 1946, said "there is greater need now than ever before for a national organization of the industry to enable the railroads to improve their work and to meet more fully their responsibilities to the public."

The fact that this fall the railroads handled weekly more carloads of freight for each car in service and more loaded box cars than ever before was cited by Judge Fletcher as one illustration of the value to the country of the cooperation in transportation which the A. A. R. is organized to foster.

"Besides its part in dealing with the immediate transportation situation," he continued, "the association's research department and the many research activities of its technical branches are engaged more actively than ever before in research and study looking to the long-range improvement of transportation service. The Railroad Committee for the Study of Transportation will complete in 1947 what is perhaps the most complete and detailed study yet made of transportation in general, especially in its economic aspects.

"During the year, the research committees of the Engineering division, for example, will carry on some 50 specific projects looking toward improvement in track and structures; the Signal section, some 40 projects in its field; the Communications section, a variety of projects, including radio and inductive train communications; the Mechanical division, more than 50 projects dealing with improvements in locomotives, cars and shops; and the list could be continued.

"The departments, divisions and sections of the association," Judge Fletcher concluded, "correspond quite closely with the organization of individual railroads and work with their officers in the improvement of techniques and advancement of the art of railroading. . . . The events of the war years and of the first full year since the close of hostilities have demonstrated the value to the industry and to the country of this sort of broadly organized cooperation. The work projected for 1947 and subsequent years gives promise of even better results."

November Operating Revenues 1.7 Per Cent Under 1945

From preliminary reports of 86 Class I railroads representing 81.6 per cent of total operating revenues, the Association of American Railroads has estimated that the November gross amounted to $530,004,667, a decrease of 1.7 per cent below the $539,373,759 reported for the same 1945 month. Estimated November freight revenues were $419,573,919, compared with $377,338,582, an increase of 11.2 per cent, while estimated passenger revenues were $70,533,028, compared with $118,389,196, a decrease of 40.4 per cent. The estimate for all other revenue is $39,897,720, down 8.6 per cent from November, 1945's $43,645,981.

Packaging to Be Stressed at Materials Exposition

The Industrial Packaging Engineers Association will hold its first annual "Protective Packaging Contest" intended to develop and improve packaging materials and technique) in conjunction with its second annual Materials Handling Exposition scheduling for April 29 through May 1, 1947, at the Sherman hotel, Chicago. Three cash awards wil be made, based on the following factors: safety, conformance to carrier requirements, ingenuity in application of materials and methods, ease of handling and economy.

Ship Group Assails Rail Rate Policies

Tells House committee water carriers can't live under present adjustment

Complaints against railroad water-competitive rate policies and expressions of doubt that the Interstate Commerce Commission "fully appreciates the seriousness of the situation" are embodied in a statement on "The Emergency in Domestic Shipping" which has been submitted to the House committee on interstate and foreign commerce by the National Federation of American Shipping. The statement went to the committee's subcommittee on transportation which is engaged in the "national transportation inquiry" launched more than a year ago.

It identified the federation as a "nonprofit organization whose membership owns more than 90 per cent of owner-operated American flag ocean-going tonnage in the domestic and foreign trades." The present status of water transportation was described generally as "equivalent to that of an industry-wide receivership," and the review of the "historical deterioration of the domestic trades" attributed a large part of the difficulty to the attitude of the railroads which "have not only failed to cooperate, but have acted on a basis consistent only with a hope for the destruction of the domestic merchant marine."

Finding the water carriers "in a hopeless rate squeeze," the statement went on to assert that though the railroads, too, "are in desperate need of revenue," they refuse to take advantage of the "opportunity" to raise their water-competitive rates, but have adopted "the policy of seeking their revenues primarily from other sources, leaving depressed rail rates in water-competitive areas, with the apparent hope of taking advantage of the difficulties of the water lines to drive them out of business."

This charge was supported by reference to railroad evidence in the Ex Parte 162 rate-increase case, where "some railroads have asserted that even the full increase requested is inadequate and a deficit in 1947 is inevitable." The I. C. C.'s final report in this Ex Parte 162 proceeding was reviewed in the *Railway Age* of December 14, page 992.

See Rate Increase "Rigged"—"One would expect," the Federation's statement continued, "that under these circumstances the rails would hasten to raise their depressed water-competitive rates, with the knowledge that their water competitors also would make upward adjustments so as to

maintain equitable rate relationships and secure urgently needed revenues. The duty of the railroad managements to their stockholders, if no other motive, would seem to require such action. Yet the rails have failed to initiate any action to take advantage of this fortuitous opportunity to improve their precarious financial position. On the contrary, the rails in asking for a 25 per cent increase in freight rates have so rigged the incrcease as further to depress the rates on major water-competitive commodities in relation to normal rates. . . .

"At the hearings on their petition for increased rates, when pressed for a commitment that they would voluntarily raise their rates to meet increases in competitive water rates, the railroads refused to give any such assurances, offering instead vague and generally evasive statements of their desire to investigate the matter further. What is behind the railroad position? There can be only one explanation. The rails apparently have come to the conclusion that their long struggle to eliminate and destroy water competition is approaching success. In the hope of early victory they are needlessly dissipating their revenues during a period of urgent need. They are attempting to force the non-competitive traffic to carry the undue burden of a disproportionate share of the total transportation cost."

Coming to its complaint that the water carriers have been unable to secure "necessary prompt relief from the Interstate Commerce Commission," the statement presented a bill of particulars in the form of a chronological account of commission proceedings on the complaint against water-competitive rail rates which was filed last March by the United States Maritime Commission and War Shipping Administration. Prepared before the I. C. C. had acted on this complaint and ordered investigations of the competitive-rate situation, as reported elsewhere herein, the statement said that eight months had passed "since the commission first was requested to act in the emergency confronting the domestic trades." It added that the commission had in that time done little to solve the problem—"save for an order directing the rails to show cause why certain fourth-section orders should not be vacated, many of which had so little present justification that the rails consented to their vacation."

Questions I. C. C.'s Interest—"The water lines," the statement went on, "appreciate that the commission is burdened with a tremendous problem, that its personnel has very little experience in the regulation of water transportation, and that it has been handicapped by budgetary limitations on the expansion of its staff. However, it is doubted whether the Interstate Commerce Commission fully appreciates the seriousness of the situation here presented. This notwithstanding the fact that it asked for and secured from Congress authority to regulate water carriers under the Transportation Act of 1940 for the purpose of securing more effective control of the inter-carrier rail-water rate levels."

In summing up, the statement warned that the situation, "a serious one even before the war," has now become "acute and almost irreparable, short of speedy assistance from the Interstate Commerce Commission and Congress." The plight of the water carriers was likened to that of the railroads at the end of World War I; but "the contrast between the treatment they [the railroads] received from the government and that thus far afforded the water lines is striking."

"At that time," the statement continued, "when the rails were about to be turned back by the government, it was evident that the low rate structure made it impossible for the railroads to break even on the rates in existence at the end of the war. Congress and the Interstate Commerce Commission solved the problem with remarkable speed and liberality. Congress provided a six-month limited guarantee of railroad income, under which it has been estimated that the government has paid approximately $536,000,000 to the railroads. Before the end of this six-month guarantee period, and in the remarkably short period of 90 days, the Interstate Commerce Commission granted the railroads rate increases estimated to yield $1,500,000,000 of additional revenues annually.

"The water lines at the end of this war find themselves in a comparable position. But they do not ask the government for subsidies to facilitate their return to business, although subsidies may be needed if other relief fails. They ask only that the unfair practices of the railroads which preclude a reasonable readjustment of the water lines, be condemned and discontinued as unlawful and contrary to the national policy, in order that the water lines may readjust their rates to compensatory levels and resume private operation in this trade without government subsidy."

Coal Research Program Enlarged

The board of directors of Bituminous Coal Research, Inc., national research agency of that industry, last week approved a budget of $447,200 for its general program of cooperative research and development projects to be carried on during 1947. This is in addition to large expenditures planned in 1947 for coal-burning gas-turbine locomotive research and development by the organization's locomotive development committee.

Howard N. Eavenson, president of B.C.R. announced that this budget was higher by $72,200 than the allotment made for research in 1946. The funds were made available by voluntary contributions from coal companies and associations, coal-carrying railroads and coal-burning equipment manufacturers.

As in 1946, next year's Research program will be an expansion as well as a continuation of development work begun earlier. In 1947, according to Harold J. Rose, B.C.R. vice-president and director of research, the projects will include six on railroad locomotive utilization of coal, 15 on residential uses, eight on industrial steam and non-steam uses, and two on mining and preparation. New projects in the locomotive field include front-end cinder collection and disposal and investigations by a special steam locomotive performance subcommittee. Work will continue on air supply for locomotives, over-fire air jets to eliminate smoke, effect of fuel on locomotive performance, and handling locomotive coal to minimize breakage. The principal research will be done in the fuels division of Battelle Memorial Institute, Columbus, Ohio.

The industrial steam and non-steam uses to be studied include overfire air for fuel beds, stoker and boiler-furnace designs, and gasification of pulverized coal. Another project relates to the flow of mixtures of pulverized coal and air, including metering. Studies of the drying of coal fines will be continued. B.C.R., it was stated, will continue to be a major contributor to fundamental research at the Coal Research Laboratory of Carnegie Institute of Technology, Pittsburgh, Pa., and has special interest in the basic work on combustion and gasification reactions, heat transfer into coal during carbonization and combustion, coke quality, and production of chemicals by hydrogenating coal.

Radio Phones on B. & O. Tugs

The Baltimore & Ohio has installed frequency-modulated (very high frequency) radio-telephone service to assist in the operation of its tugboats in the harbor of Baltimore, Md.

The two-way equipment, built by the Bendix Radio Division at Baltimore, is designed to streamline the harbor operations by enabling the tug captains to remain in constant contact with their headquarters ashore, thus eliminating waste "deadhead" movement back to base to pick up new instructions after each assignment is completed.

The radio equipment provides instantaneous voice communication between the tug captains and the land station near Pier 10 of the railroad's Locust Point terminal. Each unit consists of a complete transmitting and receiving station. It is not necessary for the radio-telephone calls to go through a switchboard in order to be completed, as an operator at any one of the units can gain instant contact with the others simply by pressing a button on his own telephone handset.

Electronic Temperature Controls for New C. & O. Cars

The Chesapeake & Ohio has announced that a new and advanced electronic temperature control system will be specified for the 284 new passenger cars which are being built by the Pullman-Standard Car Manufacturing Co., for the Chesapeake & Ohio, the Pere Marquette, and the Nickel Plate under their recent joint order (reported in *Railway Age* of November 23, page 902).

The new control system, which the C. & O. is the first railroad to adopt was developed by engineers of the Minneapolis-Honeywell Regulator Company. It utilizes panel radiant heating and a new principle of modulation, and is set to eliminate cold and hot blasts from car heating.

In the electronic system, regarded by heating engineers as a highly significant development for passenger trains, thermostats are installed against the outside skin of the car. They "feel" the slightest changes in weather, even the effects of shade and

sun, and work in conjunction with other thermostats located inside the car to provide a closer control over the flow of hot or cold air. Sensitive to one-tenth of a degree of temperature, the electronic thermostats react instantaneously in contrast to present mercury thermostats which respond more slowly.

Eleven-Months' Ton-Miles

To the volume of freight traffic handled by Class I railroads in the first eleven months of 1946, was approximately 15 per cent under 1945 and about 20 per cent less than in the corresponding period in 1944, according to a preliminary estimate by the Association of American Railroads. Freight traffic in the first eleven months of 1946 totaled approximately 540 billion ton-miles compared with approximately 634 billion ton-miles in the same period last year.

November traffic amounted to about 50 billion ton-miles, an increase of one half of one per cent compared with November, 1945. The amount of traffic handled by the Class I roads in November this year, however, was 53.5 per cent greater than the volume carried in November, 1939.

The table summarizes revenue ton-mile statistics for the first eleven months of 1946 and 1945.

	1946	1945	Per cent change
First 9 months	433,053,425,000	534,826,560,000	*d* 19.0
October *a*	57,000,000,000	49,781,960,000	*i* 14.5
November *b*	50,000,000,000	49,762,306,000	*i* 0.5
Total eleven months	540,100,000,000	634,400,000,000	*d* 14.9

a Revised estimate.
b Preliminary estimate.

I. C. Accountants Form Club to Discuss Work Problems

In order that new and improved accounting methods may be developed over the Illinois Central System, the Illinois Central Accounting Supervisors' Club, consisting of 192 accounting supervisors has been organized. The group held its initial meeting on December 11, at Chicago, with R. E. Connolly, vice-president in charge of accounting, and F. E. Martin, controller, as principal speakers.

The club proposes to facilitate the interchange of ideas among accounting supervisors and to permit open discussion of railway problems of general interest. Subjects for the January meeting will be "Management Can Be Human" and "Accounting for Freight Revenue."

Officers of the new organization, all located at Chicago, are: President, J. L. Kermeen, assistant chief clerk in the office of the auditor of disbursements; vice-president, F. W. Dorner, chief of machine bureau in special auditor's office; and secretary, William J. Baader, chief of group insurance bureau.

A. N. Williams to Speak at Buffalo Dinner

R. A. Williams, vice-president of the American Car & Foundry Co., will act as general chairman of the train party that will leave New York on January 8, 1947, to attend the annual dinner of the Central Railway Club of Buffalo, on January 9, at which A. N. Williams, president of the Westinghouse Air Brake Company, will be the speaker.

This will be a renewal of the train parties that went from New York to Buffalo regularly for many years prior to the recent World War. According to a rotation plan which has been followed, the group will travel on the Delaware, Lackawanna & Western. Under this plan they will use the Lehigh Valley in 1948, and in turn in the following years the Erie, the New York Central, and the Pennsylvania.

Three Trains in Ohio Collision

A collision on the Pennsylvania's main line from Pittsburgh, Pa., to Chicago on December 13, in which the westbound "Golden Triangle" struck wreckage resulting from a rear-end collision of two freights on a parallel track, resulted in the death of 15 passengers and four employees and the injury of more than 50 persons. The accident occurred near Guthrie, Ohio, about 2:25 a.m. Both engines of the passenger train were derailed, as was the first car, a coach, and the second car, also a coach, over-rode the first.

Freight Car Loadings

Loadings of revenue freight for the week ended December 14 totaled 828,787 cars, the Association of American Railroads announced on December 19. This was an increase of 99,703 cars, or 13.7 per cent, above the preceding week, an increase of 57,193 cars, or 7.4 per cent, above the corresponding week last year, and an increase of 78,545 cars, or 10.5 per cent, above the comparable 1944 week.

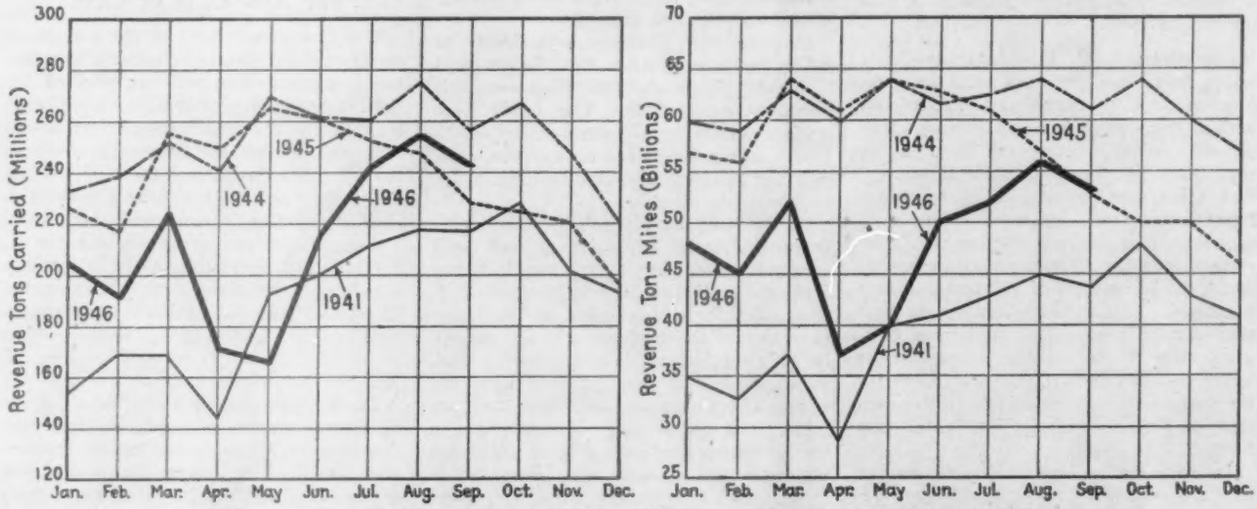
Loading of revenue freight for the week ended December 7 totaled 729,084 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, December 7

District	1946	1945	1944
Eastern	152,259	150,455	153,923
Allegheny	138,774	162,395	172,371
Pocahontas	16,798	54,132	53,697
Southern	123,941	121,826	122,423
Northwestern	99,000	92,555	89,475
Central Western	136,974	130,268	129,080
Southwestern	67,338	64,745	72,187
Total Western Districts	297,312	287,568	290,742
Total All Roads	729,084	776,376	793,156
Commodities:			
Grain and grain products	55,007	58,863	44,175
Livestock	18,627	21,057	20,091
Coal	59,943	174,419	169,200
Coke	8,144	13,004	13,364
Forest products	48,893	30,285	39,718
Ore	14,110	11,665	12,184
Merchandise l.c.l.	129,196	117,250	106,955
Miscellaneous	395,164	349,833	387,469
December 7	729,084	776,376	793,156
November 30	660,911	803,774	807,836
November 23	806,583	716,556	768,338
November 16	917,124	800,534	863,992
November 9	913,345	838,218	839,504
Cumulative total, 49 weeks	39,048,270	39,952,704	41,310,205

In Canada.—Car loadings for the week ended December 7 totalled 78,711 cars, as compared with 78,033 cars for the previous week, and 72,678 cars for the correspond-



Revenue Tons and Revenue Ton-Miles—1946 Compared with 1941, 1944 and 1945

ing week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
December 7, 1946 ..	78,711	36,386
December 8, 1945 ..	72,678	33,059
Cumulative Totals for Canada:		
December 7, 1946 ..	3,485,754	1,695,562
December 8, 1945 ..	3,437,512	1,712,137

Equipment Installed

Class I railroads had 63,616 new freight cars on order on December 1, as compared with 35,908 on the same day last year, according to the Association of American Railroads. The number on order on November 1 was 62,145.

This year's December 1 total included 15,489 hopper, of which 2,110 were covered hoppers; 5,054 gondolas, 1,324 flat, 24,059 plain box, 6,986 automobile, 10,104 refrigerator, 200 stock and 400 miscellaneous freight cars.

The Class I Roads also had 564 locomotives on order on December 1, compared with 484 on the same day in 1945. The former total included 65 steam, six electric and 493 Diesel-electric locomotives, compared with 104 steam, four electric and 376 Diesel-electrics a year ago.

Class I Roads installed 37,219 new freight cars in service in the first eleven months of 1946 as compared with 36,418 in the same period in 1945. The number installed in November was 3,092, compared with 3,502 in October. Freight cars installed in the first eleven months of this year included 13,963 hopper, of which 3,069 were covered hoppers; 5,112 gondolas, 924 refrigerator, 296 flat, 3,147 automobile box, and 13,777 plain box freight cars.

The Class I roads also put 480 new locomotives in service in the first eleven months of 1946, of which 82 were steam and 398 Diesel-electric. New locomotives installed in the same period last year totaled 602, of which 92 were steam and 510 Diesel-electric.

Permanent Referees Needed on Adjustment Board—Loomis

The National Railroad Adjustment Board should include permanent public representation so that cases can be handled and disposed of more promptly, Daniel P. Loomis, executive director of the Association of Western Railways, told 125 members and guests of the Maintenance of Way Club of Chicago at its monthly meeting on December 16. The speaker said that such representation would eliminate the "double procedure of the partisan members trying to decide a case and failing to agree and then calling in a temporary referee and explaining and arguing the case all over again before him."

Speaking on the history of railroad labor legislation and the manner in which it has worked, Mr. Loomis traced more than 50 years of labor legislation in the railroad industry. He said that the Adjustment Board "has not been entirely satisfactory in its workings," pointing out that the referees are temporary, which results in little opportunity for them to acquire any accurate experience or knowledge of railroad operating practices, rules or agreements.

"The board handles cases from every railroad in the country, a large order for any board," Mr. Loomis said, "and some of the divisions are far behind in their dockets. The rules of procedure are in need of revision. A proper right of direct appeal should be provided."

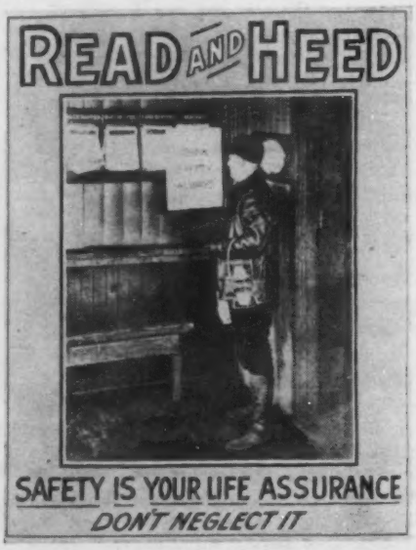
Mr. Loomis defended the Railway Labor act against criticism of its slow processes, declaring that the gains of railroad labor have been achieved almost entirely without the loss of a day's work or a day's wages, and that retroactive pay has generally been awarded or agreed to. In contrast to this, he pointed to the situation in other industries where long and costly strikes have taken place with losses to all involved.

B. & O. "Cincinnatian" Starts January 19

The Baltimore & Ohio has announced that its first newly-built post-war streamliner, the "Cincinnatian," will begin fast daily service on January 19, 1947. It will serve Baltimore, Md., Washington, D. C., and other important cities en route to Cincinnati, Ohio, on a daylight schedule. Reserved-seat accommodations will be provided at regular coach fare. The new train will make an exhibition tour along its route before going into regular operation.

R. & L. H. S. Bulletin No. 68

The story of the Cincinnati, Cumberland Gap & Charleston is told by Edmund Cody Burnett in Bulletin No. 68 of the Railway & Locomotive Historical Society. Paul T. Warner is also a contributor to this issue with an article on Pacific type locomotives. Other articles include the future of the steam locomotive as viewed from a historical background; locomotives of the Union Iron Works; the Hardwick & Woodbury Railroad and class "R" locomotives on the Pennsylvania. An index to articles appearing in Bulletins 66, 67, 67A and 68 is included. Copies are available from the Society, Baker Library, Harvard Business School, Boston, Mass. Price to members is $1.00; to non-members, $2.00.



Poster No. 280, the January, 1947, installment of the "All-the-Year-Every-Year Safety Program," conducted by the A. A. R., which is now being distributed

Research Reveals Eyebars Unharmed by Heat

Eyebars can be shortened by heating with oxy-acetylene torches without materially affecting the fatigue or static strength of the bars, according to a report of the Welding Research Council, a project of the Engineering Foundation, at New York, released this week. According thereto the Association of American Railroads has estimated that a million dollars can be saved annually if this method is used in tightening all loose eyebars.

The report discusses the disadvantages of several methods, and concluded that the most practical means is to heat a small section of the bar to cherry red and then upset this heated part by special clamps. The use of oxy-acetylene torches for heating instead of charcoal furnaces has not only reduced the time required to heat the eyebar to the desired temperature, but also insures a more uniform temperature of the heated area, the report states.

As a background for the research, it is stated that the operation of heavy locomotives at high speeds causes the pins and pinholes to wear heavily in the eyebars of many old pin-connected truss bridges. Eyebars have been known to rattle for several minutes after the passage of a train, and in some cases, one bar of a two-bar member has carried as much as 97 per cent of the total load.

The research program is financed jointly by the A. A. R., Public Roads Administration, the American Iron and Steel Institute and a number of corporations.

I. C. Refrigerator Car Article—Correction

In the Illinois Central aluminum refrigerator car article, Table II, on page 877 of the *Railway Age* for November 23, two errors occurred in naming the suppliers of foundation brake-gear parts. Both the brake beams and supports were supplied by the Chicago Railway Equipment Company, not the supports alone, as indicated in Line 8 of the table. In Line 13, the parts supplied by the Schaefer Equipment Company should have been shown as brake levers, brake beam hangers and bottom connections.

Club Meetings

A meeting of the Indianapolis Car Inspection Association will be held at the Indianapolis Union station at 7 p.m., January 6. The program scheduled is a discussion of the 1947 A. A. R. Rules.

The New York Railroad Club will meet January 16 at 8 p.m. at the Engineering Societies building, New York. The program for the meeting will be announced later.

A list of current publications will be found on page 1071.

With the Government Agencies

Debate Control of British Railroads

Provisions of nationalization bill are summarized—stockholders protest

The bill which this week has been under consideration in Parliament to bring about state ownership of Great Britain's inland transport facilities (except air and local trucking) is now available in full text. Also available are additional expressions, from competent British sources, of alarm at the method of appraisal of privately-owned corporate property provided in the bill, a feature wherein it is said to depart drastically from the principle that was followed in the nationalization of coal and is being applied in the government's acquisition of cable and radio.

As previously pointed out in *Railway Age*, the Labor Party has determined to offer holders of British railway securities the equivalent in government stock of those securities' stock exchange prices on specified dates. When the coal industry was removed from the orbit of private enterprise holders of its securities were compensated on the basis of "net maintainable revenue." It has been pointed out that the new method now proposed enables the single buyer—the government which for seven years has fixed the revenue of the railroads to suit its own purposes—to take advantage of a deliberately controlled capital market to perpetuate that market's low income rate on that private capital which has ventured into the railroad field.

Government Pushes Bill—In what was described as an unprecedented action, the council of the London Stock Exchange recently protested against what it termed the injustice of the method of compensation for railroad securities which the government has proposed in this bill. The intervention of this body into the discussion of the terms of the nationalization program is reported to have given owners of railroad stocks some hope, not so much that state ownership would be averted, or even deferred, but that the financial basis on which it is consummated might be somewhat liberalized. Subsequent debate in Parliament, however, according to reports crossing the Atlantic, did not indicate that the party in power has yielded on that point, and the bill received a favorable House of Commons vote December 18.

The so-called Transport Bill proposes to set up a "publicly owned system of inland transport (other than by air) and of port facilities. It provides for a British Transport Commission of five members which is to conduct the transportation of freight and passengers by railroad, highway and inland waterway, and to carry on any other activities (such as the operation of hotels) which any of the corporations taken over could carry on."

Told to "Integrate"—The commission is instructed to promote an "efficient, adequate, economical and properly integrated system of public inland transport" in such ways that, on the average, "the revenue is not less than sufficient for meeting charges properly chargeable to revenue." Its functions are to be carried out by agencies termed executives, one for railroads, one for docks and inland waterways, one for road transport, one for London passenger transport, and one for hotels.

British railroads and canals will become state property, under this bill, on January 1, 1948. Privately-owned freight cars are to be taken over at the same time, and operation of such cars thereafter is prohibited, with certain exceptions. An "obligation" is placed on the commission to acquire all truck operations which in 1946 were devoted predominately to transporting freight over distances of 40 miles or more (again subject to some exceptions). After a date to be set local or private truck operations are to be licensed only if they fall within the 40-mile limitation.

Can Borrow a Billion—The bill also provides for so-called "area schemes" for the coordination of passenger transport services and for port facilities, and for liaison between the commission's activities and those of coastal shipping. The present Railway Rates Tribunal is to become the Transport Tribunal, with enlarged jurisdiction. The tribunal will pass upon rates and charges proposed by the Transport Commission. The commission is author-

(*Continued on page 1062*)

War Agencies Liquidating

President Truman last week created the Office of Temporary Controls to take over the functions of most of the remaining federal war agencies, except the Office of Defense Transportation and the housing agencies. Major General Philip B. Flemming heads the new agency, continuing to serve also as federal works administrator.

Consolidated into the new agency were the Office of War Mobilization and Reconversion, the Office of Price Administration, the Civilian Production Administration, and the Office of Economic Stabilization. John R. Steelman, who has been director of O.W.M.R., resumes his former role as one of President Truman's assistants.

Water-Competitive Rate Probe Ordered

I.C.C. also vacates railroads' fourth-section relief on Florida citrus rates

Responding to the petition filed last March by the United States Maritime Commission and the War Shipping Administration, the Interstate Commerce Commission has decided to institute investigations into water-competitive all-rail rates and water-carrier rates with which such rail rates are designed to compete. Meanwhile, the commission had disposed of the first group of fourth-section proceedings which it reopened as a result of the complaint, its December 10 report on further hearing in Fourth Section Application No. 16028 and related cases having vacated orders whereby the railroads have had relief from the long-and-short-haul clause in connection with the maintenance of water-competitive rates on citrus fruits in carloads from points in Florida to Baltimore, Md., Boston, Mass., New York, Philadelphia, Pa., and related points.

Three Aspects—The commission's decision to institute the new investigations was revealed in a December 16 notice issued by I.C.C. Secretary W. P. Bartel in Ex Parte 164, which was the docket number assigned to the M. C.-W. S. A. complaint. The notice further revealed that the decision grew out of the oral argument wherein the commission heard views of interested parties on the question of whether or not it should launch an inquiry.

The inquiry, as Mr. Bartel explained it, will involve three investigations of all-rail rates, each of which will deal with "one of the principal aspects of the general question of water-competitive rates," as follows: (1) Atlantic coastwise (including Atlantic-Gulf of Mexico); (2) Intercoastal (Atlantic and Gulf to and from Pacific); (3) Pacific coastwise. There will be three like investigations of the water rates on this competitive traffic.

Commission orders instituting the investigations with respect to the second of the foregoing groups came along with the Bartel notice. They are No. 29663, Transcontinental Rail Rates, and No. 29664, Intercoastal Water Rates; and both are assigned for prehearing conference at the commission's Washington, D. C., office on January 16, 1947. The No. 29663 order brings in issue various specified rail transcontinental rates, including those on aluminum or aluminum articles, small-arm ammunition, brass, bronze or copper articles, canned goods, drugs, glass, iron and steel articles, lumber, paint, sulphur, tin plate,

tobacco, borax, and shingles. Intercoastal water carrier rates on a like group of commodities are brought in issue by the No. 29664 order.

With respect to the other two groups of rates involved in the general inquiry (Atlantic coastwise and Pacific coastwise), Mr. Bartel said that it was not feasible to prepare the investigation orders at this time "because of lack of information necessary to identify with sufficient particularity the rates which should be included." He added that the water carriers and other interested parties "are requested to furnish the commission at the earliest possible date definite suggestions for wording orders" which would meet the Administrative Procedure Act's requirement that a general notice of proposed rule making shall include "either the terms or substance of the proposed rule or a description of the subjects and issues involved."

Issues Excluded—The I. C. C. secretary's notice also revealed that the commission had considered and rejected the idea of investigating classification exceptions, motor carrier rates, and divisions of joint rail rates. Also, it considered proposals to include rail rates which are competitive with those of carriers on the inland waterways, leaving that matter open for further representations from the barge lines.

"The commission," the notice said with respect to these matters, "is of the view that for the present it should not investigate classification exceptions of any kind and that any comprehensive consideration of such exceptions should await the establishment of the uniform classification required by its findings in *Class Rates Investigation*, 1939, 262 I. C. C. 447.

"In general, it is not considered feasible or necessary to include motor carrier rates in these investigations. A possible exception exists in the case of the Pacific coastwise rates, as to which, it is believed, motor competition may have influenced the existing rail and water rates. Parties interested in the Pacific coastwise situation are requested to advise whether the motor carriers in that territory should be made respondents, and if so, to specify such carriers.

"It is not deemed desirable to include in any of these proceedings the question of the lawfulness of divisions of joint rates for all-rail transportation.

"Since the filing of the original petition by the United States Maritime Commission counsel for certain carriers on inland waterways have suggested that water-competitive rail rates in which they are interested should be included in these investigations. We understand, however, that those carriers are not now in a position to specify the additional rates which should be included. Further communications from them bearing on this aspect of the matter will be given due consideration."

Citrus Rates Affected—In the decision vacating the outstanding fourth-section relief with respect to rates on citrus fruits from Florida to North Atlantic ports, the commission rejected Examiner O. L. Mohundro's proposed report which had recommended that the relief orders be affirmed with a modification which would make them subject to a higher minimum car-mile yield. As noted in the *Railway Age* of September 21, page 488, the examiner's recommendation was based on his finding that the water carriers control the rate situation, being in a position to publish increased rates which would leave the railroads with no alternative except to meet the resultant truck-boat charges. The commission report by Commissioner Mahaffie bears the notation that Commissioners Aitchison and Splawn concur "in the results."

The relief it cancels has authorized the railroads to meet truck-water rates from Florida origins to North Atlantic ports, except that to Baltimore a differential of 5 cents per box (5.6 cents per 100 lb.) over the truck-water charge has been required, and to Boston a differential of 2.5 cents per 100 lb. The commission's adverse decision is based generally on its finding that "conditions have so changed since our last fourth-section relief order was entered herein as to remove the grounds for a 'special case' upon which it was based."

This finding was preceded by a review of evidence indicating that ship-operating costs have increased 57 per cent and truck costs "at least 60 per cent" since 1940; that the water lines have not entered the citrus fruit trade since the war; and that "there can be no water competition at the present rate level and only remote possibility of competition from water carriers during the 1946 season if the outstanding fourth-section relief promptly is vacated."

Meanwhile the commission found no occasion to determine its authority and duty under the Transportation Act of 1940's declaration of policy in resolving the issues in the present case. Counsel for the Maritime Commission had asserted that the policy declaration, properly construed, required vacation of the relief orders. So the commission took occasion to give him some background information.

"That argument," it said, "no doubt is premised on the thought that vacation of the outstanding orders would require the rail carriers immediately to raise their rates to the full level of reasonable maxima. Such a construction of this provision of the statute is not supported by the legislative history. . . . Such a result need not necessarily follow the vacation of the outstanding fourth-section relief. Less than 10 per cent of the Florida citrus traffic goes to the higher-rated intermediate points. Mere vacation of the outstanding orders would only require correction of what would then become unauthorized departures from the fourth section. Correction of the unauthorized departures could be effected by reducing the higher-rated intermediate point rates or by increasing the port rates or by some adjustment in both the intermediate point and the port rates." Later on, the commission emphasized that "this is not a rate proceeding in the ordinary sense that we might be called upon to determine what is or would be a reasonable level or adjustment of rail rates on citrus fruit."

The Secretary of Agriculture was in opposition to the Maritime Commission, his representatives appearing in support of the railroad position calling for continuance of the relief. Counsel for the Department of Agriculture, as the commission summarized his position on the applicability of the policy declaration, "undertook to show how alleged advantages of water transportation in the past had largely developed around the concept that it is a lower-cost type of transportation, that the concept of 'inherent advantage,' however, would have to be set aside if we should accede to the claim that water carrier rates in this instance must be increased and that the foundation therefor must be provided by substantial increases in the all-rail rates. Counsel construes the issue as a request that we require increases in rates of one type of carrier to permit another type of carrier to share the traffic. We agree with counsel that such is not required by the statute."

With this, the commission turned from the policy declaration to the fourth section where it found more direct authority for its determination on the basis of the changed conditions which have left no "special case" warranting continuance of the relief.

Transportation Corps Changes

The War Department has announced that Brig. Gen. Paul F. Yount has assumed the post of assistant chief of transportation in the Army, succeeding Brig. Gen. Robert H. Wylie, who is retiring for the service to become manager of the Port of San Francisco, Calif. Colonel Harold Miller will supervise the work formerly under General Yount, being succeeded in turn by Colonel G. C. Bunting, who becomes acting executive officer in the office of the chief of transportation.

Emergency Board Report

Exemption of certain positions requiring special qualifications from the seniority rules, and, in some instances, from the overtime rules of the collective agreement between the Duluth, Missabe & Iron Range and the Brotherhood of Railway Clerks has been recommended by the National Railway Labor Panel emergency board appointed recently to investigate a dispute involving those matters. With respect to nine other disputed rules of the contract, the board recommended adoption of modifications to which the parties had tentatively agreed in earlier negotiations or during the board's proceedings.

O. D. T. Extends Relaxations of L.C.L. Loading Order

Relaxations of the Office of Defense Transportation's l.c.l. minimum-loading order, which were made effective October 21 to aid in relieving freight-house congestion, have been extended until February 28, 1947. The relaxations are embodied in General Permits ODT 1, Revised-10, and Revised-11, which were originally scheduled to expire December 20.

The first waives the order's 10-ton minimum loading requirements with respect to westbound and southbound l.c.l. cars from Official territory east of the Indiana-Illinois state line (not including any point within the Chicago switching district); under the second, eastbound l.c.l. cars may be forwarded from the same territory, but including the Chicago switching district, when consigned to any one destination with a minimum of 7½ tons per car.

Shortly after the permits were issued, Colonel J. Monroe Johnson, director of O.

D. T., revealed that he had gone along on them for an "experimental period" of 60 days, though he was "extremely doubtful" about the matter. Meanwhile, the relaxations have been defended as "sound" by Warren C. Kendall, chairman of the Car Service Division, Association of American Railroads, who reported their favorable effect in the way of relieving freight house congestion in his latest monthly review of the "National Transportation Situation." (See *Railway Age* of November 30, page 929).

O. D. T. Ends Control of Great Lakes Towing Company

Cessation of operation, possession and control of the properties of the Great Lakes Towing Company, Cleveland, Ohio, by the Office of Defense Transportation was announced this week by that agency. The action became effective December 18, and was taken, according to the O. D. T., upon a determination of its director, Colonel J. Monroe Johnson, that "the purposes of the Executive Order under which possession and control of the properties were taken have been accomplished."

Control of the company was assumed by the O. D. T. on November 29, 1945, following a 13-week tie-up of towing operations at Buffalo, N. Y., and of less duration at other lake ports. Colonel Johnson said that because the 1946 Great Lakes navigation season is virtually over, he considered that there was no further justification for retention of control of the towing company's properties.

Representation of Employees

The Brotherhood of Railroad Trainmen has retained its right to represent road conductors employed by the Pennsylvania-Reading Seashore Lines, having defeated the challenging Order of Railway Conductors in a recent election which has been certified by the National Mediation Board. In ordering two other elections to determine the representation of Chicago & North Western dining car employees and tower and telegraph employees of the Union, the board has issued decisions passing upon conflicting claims of interested labor organizations as to the grouping of employees into crafts or classes for voting.

The conflict on the C. & N. W. arose out of an application for investigation of a representation dispute which was filed by the Joint Council Dining Car Employees, Local 351, Hotel and Restaurant Employees International Alliance and Bartenders International League of America, American Federation of Labor. In its final form this application sought to include in the dining-car-employees craft or class all chefs, cooks, waiters-in-charge without stewards, waiters, stationary pantrymen, pantrymen, buffet car porters, and bartenders; and the board has gone along on that basis, ordering an election with all those employees voting as a unit. Such a determination was opposed by Order of Railway Conductors which has represented the dining car chefs and cooks, and the Brotherhood of Sleeping Car Porters which has represented the buffet car porters. Each of these unions claimed that the employees they represented constituted separate classes or crafts.

The controversy on the Union arose out of an application filed by the United Steelworkers of America, Congress of Industrial Organizations, for an investigation of its representation dispute with the Brotherhood of Railroad Trainmen. The dispute involved nine switchtenders employed at three points on the road and represented by the B. of R. T. whose contract covered yardmen. The C. I. O. organization contended that the employees involved should be included in the telegraphers-and-towermen craft which it represented.

Three of the employees are assigned to an electric-pneumatic interlocking plant, and the board ruled that they should be classified as towermen, while the six employed at the other two points, where much of the work involves throwing of hand switches, should remain in the yardmen's group. Since the three employees thus transferred to the telegraphers-and-towermen craft did not participate in the 1944 election, which made the C. I. O. the collective bargaining agent for that craft, the board ordered a new election with the names of the C. I. O. union and the B. of R. T. on the ballot.

Jensen Appointed Director of I. C. C.'s Bureau of Traffic

The Interstate Commerce Commission has announced the appointment of Clarence G. Jensen as the director of its Bureau of Traffic, effective December 15. Mr. Jensen succeeds William V. Hardie, who, as noted in *Railway Age* of January 19, page 209, retired at that time, accepting a position as traffic consultant of the St. Louis-San Francisco.

Mr. Jensen was born on May 24, 1893, in St. Paul, Neb., where he received his early education, and has been in the employ of the commission since 1912. A veteran of both World War I and World War II, Mr. Jensen also holds a law degree from George Washington university, Washington, D. C. His first position with the commission was that of a stenographer in the Special Docket Division, and in 1920, following his discharge from the armed forces, he was named a general correspondence clerk.

Clarence G. Jensen

In 1922, he was appointed a classification agent in the Bureau of Traffic, and from 1931 to 1942 he served as assistant to the director of that bureau. He was appointed assistant director in 1945 and has served as its acting director since Mr. Hardie's retirement.

During World War I, Mr. Jensen served as a warrant officer at the headquarters of the United States Army in Paris. Commissioned a major in World War II, Mr. Jensen was assigned to transportation and procurement duties with the Air Corps. He also served for four months with the Allied Control Council in Berlin and participated in the Pearl Harbor investigation. He was discharged with the rank of colonel.

Aitchison Elected Chairman of I. C. C. for 1947

Commissioner Clyde B. Aitchison has been elected by the Interstate Commerce Commission to be its chairman for the calendar year 1947. He was chosen after Commissioner J. Monroe Johnson, who was in line under the commission's annual-rotation policy, declined, as he did a year ago, because of his duties as director of the Office of Defense Transportation.

Mr. Aitchison will succeed George M. Barnard who continues as commissioner, his present term running until December 30, 1950. In the past three or four months Mr. Aitchison has been acting chairman from time to time during absences of Chairman Barnard, who has been recuperating from a flare-up of injuries suffered in an automobile accident shortly before he became a member of the commission two years ago.

Chairman-elect Aitchison is the commission's senior member in point of service, having served continuously since 1917 when he was appointed by President Wilson. He received successive reappointments from Presidents Harding and Coolidge and twice from President Roosevelt. The 1947 term will be Mr. Aitchison's fourth as chairman. Before coming to the I. C. C. he was for nine years a member of the Railroad Commission and the Public Service Commission of Oregon.

I. C. C. Secretary W. P. Bartel's announcement of Mr. Aitchison's election said further that "his period of service as commissioner, more than 29 years, exceeds that of any of his predecessors, and also that of any member of a regulatory body, either federal or state."

Maritime Commission Gets New Extension of Carrier Rights

The Interstate Commerce Commission this week extended from December 31 to March 1, 1947, the U. S. Maritime Commission's "temporary" authority to operate as a common or contract carrier by water in coastwise or intercoastal service between points on the Atlantic, Gulf of Mexico, and Pacific coasts. The authority has previously been extended from time to time since it was first granted by the I.C.C. more than a year ago.

The M. C. petition for the present exten-

sion reiterated previous professions of M.C.'s desire to withdraw from the operation of domestic shipping services, but added that "mounting costs and disproportionately low rates have continued to make it impossible for successful private operation to be resumed." M.C. will be forced to retire from the domestic trade on March 1 unless it obtains from Congress legislation extending the emergency authority under which it is now operating. As reported in the *Railway Age* of December 7, page 973, Vice Admiral W. W. Smith, chairman of M.C., recently brought the matter to the attention of John R. Steelman, director of the Office of War Mobilization and Reconversion.

October Accident Statistics

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for October and this year's first 10 months. The compilation, which is subject to revision, follows:

Item	Month of October		10 months ended with October	
	1946	1945	1946	1945
Number of train accidents*	1,312	1,241	12,797	14,080
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	141	116	1,319	1,348
Injured	86	106	992	1,022
Passengers on trains:				
(a) In train accidents*				
Killed	...	3	46	59
Injured	39	80	1,238	1,530
(b) In train-service accidents				
Killed	1	6	34	56
Injured	239	248	2,506	2,294
Travelers not on trains:				
Killed	1	3	15	10
Injured	86	91	858	898
Employees on duty:				
Killed	73	70	548	716
Injured	3,210	3,790	31,931	39,256
All other nontrespassers:**				
Killed	164	232	1,611	1,650
Injured	630	605	5,392	5,587
Total—All classes of persons:				
Killed	380	430	3,573	3,839
Injured	4,290	4,920	42,917	50,587

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers,* were as follows:

Persons:				
Killed	145	197	1,466	1,465
Injured	409	456	3,402	3,305

Car Service Orders

Interstate Commerce Commission Service Order No. 653, effective from December 20 until April 1, 1947, unless otherwise modified, reestablishes for gondolas and open and covered hopper cars the same scale of super-demurrage charges running up to $16.50 a day that were in effect under Service Order No. 599 which was not extended at the time of its expiration on December 1, when the coal miners' strike had virtually eliminated demands for the cars involved. Exempt from the order is import, export, coastwise or intercoastal traffic during the period such traffic is held in cars at ports for transfer to or from vessels or held at United States border crossings.

Service Order No. 651, effective from December 14 until May 31, 1947, suspends Norfolk & Western tariff provisions in order to authorize a 60-ton carload minimum on coal shipped in that road's high-side gondola cars of 180,000 lb. capacity, thus making such cars available for general service during the period when they are not required for the lake cargo and tidewater coal movements for which they are designed.

Service Order No. 648, which is part of the recently-established priority set-up for grain shipments under the foreign relief program, has been modified by Amendment No. 2 which adds Council Bluffs, Iowa, to the list of loading points covered by the order's permit system. The amendment became effective December 14.

Three service orders which had been scheduled to expire this week have been extended until June 30, 1947. They are Service Order No. 369 which provides super-demurrage charges on closed box cars; Service Order No. 112 which provides that no free time shall be allowed on refrigerator cars loaded with fresh or green fruits or vegetables held for movement from one location to another within switching limits of the same city or town except when released within 48 hours of arrival; and Service Order No. 558, which authorizes the substitution of refrigerator cars for box cars for the transportation of fruit and vegetable containers and box shooks from southern Oregon and California to destinations in California.

Warns That Traffic Agreements Must Be Filed

Acting Chairman Aitchison of the Interstate Commerce Commission on December 12 sent identical letters to R. V. Fletcher, president of the Association of American Railroads, and J. M. Hood, president of the American Short Line Railroad Associaton, directing their attention to section 6(5) of the Interstate Commerce Act which stipulates that "every common carrier subject to this part shall also file with said commission copies of all contracts, agreements, or arrangements with other common carriers in relation to any traffic affected by the provisions of this part to which it may be a party."

"The act," Commissioner Aitchison went on, "puts the duty of filing copies upon the common carriers, and not upon the commission to request that they be filed. Dilatoriness or failure of common carriers under part I of the act in filing copies of the documents described is as inexcusable as would be their omission to file tariffs or schedules of their rates, and is subject to the same penalties.

"As commissioner through whom the Bureau of Traffic reports to the commission, I wish to impress upon common carriers subject to part I of the act that the commission expects full and immediate compliance with this mandate, and that instances in which such carriers omit performance of this duty must be reported, when discovered, to the proper authorities for investigation and any further steps which may be warranted.

Copies of any such contracts, etc., not already filed with the commission, should be filed forthwith. I will appreciate it if you will kindly undertake to bring this matter to the attention of your several members."

Drops Cab-Seating Complaint

Acting upon advices from the Brotherhood of Railroad Trainmen that it had reached an agreement on the matter with the Western Pacific, the Interstate Commerce Commission has dismissed that union's complaint regarding seating facilities for brakemen and trainmen. The complaint in No. 29453 originally named the Atchison, Topeka & Santa Fe as a defendant along with the W. P., but the brotherhood reached agreements with the Santa Fe lines several months ago.

Cancellation of Furlough Fares Without Hearing Asked

Cancellation, without formal hearing, by Division 2 of the Interstate Commerce Commission of its November 29 order which suspended from December 1 to January 30, 1947, the operation of schedules filed by certain railroads and motor carriers proposing to cancel furlough fares for military personnel in the territory generally east of the Mississippi river was urged by the railroads involved in a petition filed this week with the commission. The suspension order was noted in *Railway Age* of December 7, page 977.

The petitioning railroads asserted that the commission "has no jurisdiction to require continuance of the furlough fares" and declared that "in no event should Division 2 continue its suspension of the tariffs in question beyond January 30." The originally-scheduled December 11 hearings in the proceedings, I. & S. Dockets Nos. 5444 and M-2708, have been postponed to a date to be fixed by the commission.

Steel for Domestic Freight Cars Given Preference

Steel for the production of domestic freight cars has been given precedence over requirements for export freight car output, it was announced this week by the Office of Temporary Controls, the new agency to which the Civilian Production Administration has been transferred.

According to the announcement, which emphasized the urgency of domestic railroad needs for steel, Direction 18 to the steel preference order (M-21) issued December 17, provides that no freight car builder shall place any order for steel which is to be used in the production of freight cars for export, on orders received after November 30, unless such builder has written authorization from the C.P.A. The latter agency defined export orders as "orders for delivery outside the United States, its territories or possessions, or Canada."

The announcement said that applications for steel for such export orders must be

made to the C.P.A., furnishing complete information as to (1) production schedules classified for domestic and export cars ordered before November 30, and export cars ordered after November 30; (2) steel tonnage on hand; (3) the additional tonnage for which authorization is requested and (4) the effect which such an authorization, if granted, would have on domestic car production.

"Freight cars awaiting repairs totaled approximately 67,294 units on November 1, or approximately four per cent of all cars available for service," the statement continued. "This percentage represents a net reduction of 15,514 'bad order' cars . . . or approximately 18 per cent of the backlog existing in July," when, according to C.P.A., it started expediting deliveries of steel to the car repair shops.

"While this reduction in bad order cars was an encouraging development," the statement added, "production of new freight cars has not progressed as rapidly as had previously been anticipated. This lag occurred primarily because the car builders had scheduled export orders last year when domestic demand had not yet appeared in full force. The car manufacturers said that a rescheduling of operations in the midst of production would have resulted in inefficient operation of their plants and severe financial losses, and would not have benefitted the domestic program proportionately.

"C.P.A., however, now reports that the situation requires that domestic production have preference over all export needs, despite the fact that most of the foreign orders are from war-devastated countries of Western Europe, whose freight car needs are acute."

Helicopter Mail Service in N. Y. Area to Start January 6

Experimental helicopter mail service for the New York City area will be inaugurated January 6, 1947, it was announced in Washington, D. C., this week by Second Assistant Postmaster General Gael Sullivan. The service will operate over three circular and two shuttle routes covering a radius of 50 miles from the New York General Post Office. It will touch 39 suburban post offices in New York, Long Island. New Jersey and Connecticut.

According to Mr. Sullivan, the helicopters will "hover" in transferring mail to and from post offices at points along the proposed experimental routes where landings are not deemed advisable. He said that such an operation requires ten seconds with the plane "hovering" five to ten feet in the air.

Dismisses Alleghany Complaint Against Thompson Brothers

Division 4 of the Interstate Commerce Commission has dismissed the complaint wherein the Alleghany Corporation charged that Guy A. Thompson, trustee of the Missouri Pacific, and his brother, Frank A. Thompson, trustee of the St. Louis-San Francisco, had violated the Interstate Commerce Act's section 5 which relates to combinations and consolidations of carriers. The dismissal order notes how Alleghany recently notified the commission of its withdrawal from further participation in the proceeding, which is Docket No. 29533.

The complaint and answers thereto, the order also says, "afford no reasonable grounds for any belief that defendants have accomplished or affectuated, or participated in accomplishing or effectuating control or management of the properties of the Missouri Pacific and St. Louis-San Francisco in a common interest, or are controlling or managing or have the power to control or manage said properties in a common interest, in violation of the provisions of section 5(4) of the Interstate Commerce Act."

Revenue Apportionment Plan Defended by Express Agency

Responding to that part of the Interstate Commerce Commission's recent express-rate decision which complained that the present plan for apportionment of express revenues among the railroads was adopted without commission approval and is "apparently" in violation of section 5(1) of the Interstate Commerce Act, the Railway Express Agency has asked the commission to rule that the arrangement does not require specific approval. In the alternative, however, the R. E. A. petition requests approval of the plan, if the commission should determine that such action is required.

The commission registered its complaint in its October 28 report in Ex Parte 163 wherein it authorized R. E. A. to establish temporary rate increases calculated to produce about $58,900,000 in additional annual revenue. As noted in the *Railway Age* of November 2, page 738, where that report was reviewed, the commission made extended comment on the apportionment plan, which was adopted in 1938 as a modification of the plan originally installed in 1929 when the railroads set up R. E. A. as their affiliate to take over the express business.

The commission took the position that only plan of apportionment which it had approved was the one it sanctioned in 1929 when it was authorizing the whole R. E. A. set-up. The supplemental agreement which modified the 1929 plan and became effective July 1, 1938, the report went on, was not filed with the commission until after the Ex Parte 163 hearings. Meanwhile it had noted the "apparent" violation of section 5(1) of the act and "of our order setting forth the authorized method of apportionment," adding that the Express Agency would be "expected to comply with that provision of the act."

R. E. A.'s petition states that the commission's 1929 decision in *Securities and Acquisition of Control of Ry. Exp. Agency*, 150 I. C. C. 423, approved the railroads' ownership and control of the Express Agency, but did not prescribe or authorize any particular method of apportionment of R. E. A. earnings. In other words, as R. E. A. reads the decision, the pooling was approved but the devising of a method of dividing the earnings was left to the railroads.

The first apportionment plan, which became effective March 1, 1929, was based on information gathered monthly from waybills. According to the petition, this proved so costly and time-consuming that it was abandoned in 1938 in favor of the present plan, which is based on a test period of experience. It is further stated that all railroad parties to the R. E. A. operating agreement consented to the new plan which has brought accounting and other economies amounting to $4,000,000 a year. Moreover, the growth of traffic and increases in wages since 1938 would make the cost of returning to the original plan "greatly in excess of $4,000,000 a year."

Meanwhile, the petition reminds the commission that the matter was brought to its attention in a complaint filed March 15, 1939, by the Brotherhood of Railway Clerks, the complaint having been dismissed on November 13, 1939, on motion of R. E. A. As to the present attitude of the railroads, the petition reports that some roads have represented to R. E. A. that they are entitled to larger shares of the express revenues than they have received under the modified plan. It goes on to say that its filing "is not to be considered in derogation of the right of any rail carrier . . . to intervene in this proceeding or to make to the Interstate Commerce Commission any representations they may desire to make." Also, it is suggested that any commission action should not prevent such adjustments in the apportionments as may become necessary "to insure to each rail carrier that portion of express revenues to which it may be entitled."

Debate Control of British Railroads

(*Continued from page 1053*)

ized to float temporary loans and to borrow money for capital purposes up to £250,000,000, which may be guaranteed by the British treasury. It also is instructed to set up a reserve, "one of the purposes of which is to be the prevention of frequent fluctuations" in freight rates.

Compensation for property to be acquired under the bill is fixed as follows: For railroads and canals, according to the market values of securities on certain dates, the estimated aggregate cost being £1,065,000,000; for trucking enterprises, the net value of the assets plus, in some cases, "severance" payments; and for privately-owned freight cars, depreciated cost. All payments, with minor exceptions, are to be accomplished by issuing British Transport Stock, guaranteed by the national treasury.

Removes Charge for Reefers in Maine Potato Service

The Interstate Commerce Commission has found the charge of $5 per car per trip for furnishing refrigerator cars for the transportation of potatoes from Maine unreasonable for the future when published separately from the charges for line-haul transportation. The report by the commission's Division 3 thus requires discontinuance of the charge, but denies reparations on the basis of a finding that the charge has not been unreasonable for the past.

The decision was in No. 29161 and related proceedings which involved complaints of various individual shippers, trade associa-

tions, farm organizations, and the state of Maine. In condemning the $5 charge the commission rejected the Maine railroads' contention that box cars are suitable equipment for the transportation of potatoes, that the line-haul rates on potatoes from Maine were made in contemplation of box car movement, and that these rates plus the car rental charge are less than maximum reasonable rates.

"It appears from the facts hereinbefore set forth," the report's summary said in part, "that the decision in *Aroostook County Cham. of Comm. v. Aberdeen & R. R. Co.* 147 I. C. C. 627, sustaining the line-haul rates on potatoes from Maine there assailed, was arrived at in the light of evidence as to the growing use of refrigerator cars, the long-standing use of Eastman heater cars and lined box cars, and the cost of furnishing this equipment; that many of the rates sustained in that proceeding proved to be too high to retain the traffic and were subsequently voluntarily reduced; . . . that the present line-haul rates on potatoes from Maine yield substantial earnings; and that the only added cost incurred by the Maine carriers resulting from using refrigerator cars for potato loading instead of the cars formerly used for that purpose that may properly be offset against the $5 charge is the cost of $1.10 per car incurred by the Bangor & Aroostook in obtaining refrigerator cars.

"It further appears that ordinary box cars are not suitable for the transportation of potatoes from Maine . . . and that refrigerator cars have been the customary or 'standard' equipment used for the transportation of these potatoes for the past 20 years, thus bringing the situation in this proceeding squarely within the conclusion in *Perishable Freight Investigation*, 56 I. C. C. 449,486, that 'where insulated cars are ordinarily required for safe transportation throughout the year, or the greater part of the year, compensation (for the use of the cars) should be secured through the line-haul rates.' "

Proposed Report on Pullman's New Refund Rules

Making his proposed report in the Interstate Commerce Commission's No. 29590 investigation of the Pullman Company's new refund tariff, which became effective August 1, Examiner Charles W. Berry has recommended a general commission finding that a rule requiring the redemption of tickets a reasonable length of time before the departure of the train for which they are sold is just and reasonable. When he came to his consideration of the new tariff's specific provisions, however, the examiner made several suggestions for modifications in its present rules and the addition of others in the interest of clarity and of the late canceler. He would also have the commission eliminate opportunities for preferential treatment by the railroads of favored customers.

Dealing individually with various provisions of the tariff, the proposed report considered first that rule which stipulates that sleeping or parlor car tickets must not be sold except in connection with railroad transportation good on the train for which the sleeping or parlor car ticket is issued, and for not less than the complete journey for which the sleeping or parlor car accommodations are desired. This rule was carried over from the previous redemption tariff which was in effect from May 20, 1942, until August 1; and the examiner saw no reason to question its reasonableness.

Finds Rule Ambiguous—Turning then to the tariff's redemption rules, Mr. Berry undertook to bring out the meaning of the one which says, "without explanation," that tickets will not be redeemed by ticket agents unless the space covered was released and replaced on sale and the number under which reserved erased from the diagram. He referred to testimony of record wich indicated that this was intended to mean that a ticket agent will not redeem a ticket that was sold at another office or in another city when he has no knowledge that the reservation was released within the time limit. "If such was the intent of the rule, it is extremely ambiguous," the examiner observed. He went on to suggest that such intent could be stated more clearly, adding, however, that even then the rule would be unreasonable if it charged the passenger with responsibility for the agent at the office at which the ticket was purchased putting the space on sale and making the necessary corrections in the diagram.

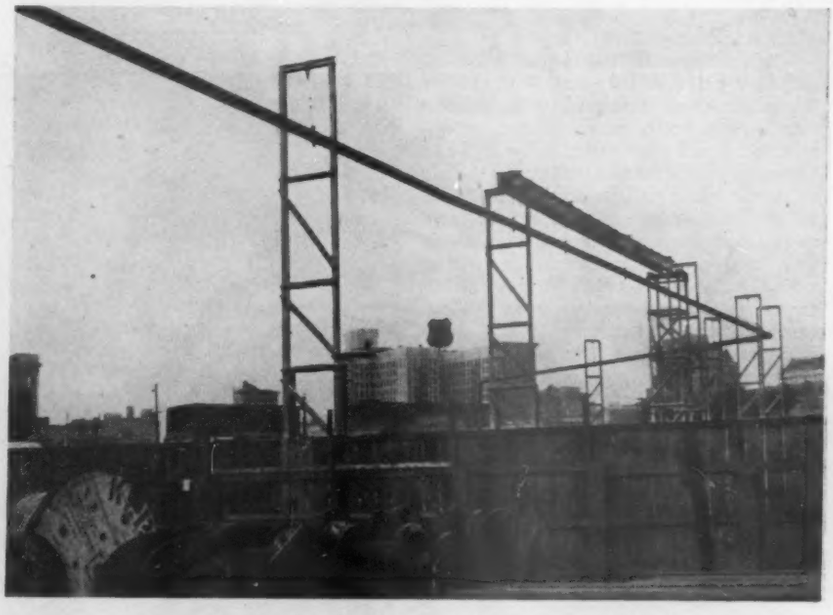
All of which led into Mr. Berry's finding that there was no objection to a rule providing that tickets will not be redeemed by any agent except the one to whom the ticket is presented when a reservation is canceled, or by another agent in the same office, unless the agent has a diagram or information showing the timely cancellation of the reservation and that in other instances the ticket must be presented to the general passenger agent at Chicago. The present tariff rule should be so amended or canceled, Mr. Berry concluded.

As to the period within which sleeping-car tickets may be redeemed, the new tariff's general rule is that they must be presented not later than the day in advance of departure of trains for which they were sold. Mr. Berry pointed out that the phrase "not later than the day in advance" does not mean 24 hours prior to the departure of the train, but any time on the day previous to such departure. The time limit is thus subject to variations ranging, as the proposed report put it, "from a few minutes to nearly 24 hours." Here examiner Berry suggested that the rule might well be modified to provide that the tickets would be redeemed up to a specified hour on the day prior to departure of the train, but not later than six hours prior to train time. He did not, however, recommend a commission finding on the matter, for there had been no complaint against the present rule nor evidence showing that it was unduly preferential or discriminatory.

Conditional Refunds—The new tariff's general rule for the redemption of tickets for seats in parlor cars provides that they may be turned in for refund at any time before the departure of the train. The examiner made no comment on this beyond noting that it involved no change from the previous tariff which had the same rule also for the redemption of tickets for space in sleeping cars. Likewise did he make only brief reference to those provisions of the new tariff which permit release of space by telephone, and provide for the exchange of space for different accommodations.

He then took up the provision that requires the agent when a sleeping-car ticket is presented on the day of, but before,

* * *



Long Steam Line Heats Union Pacific General Offices

Heat for the Union Pacific general office building and annex at Omaha, Neb., is now supplied by steam from a power plant at the company's Omaha shops through an 8-in. insulated pipe line 3,835 ft. long, of which a length of 1,290 ft., as shown in this view, is carried overhead on 46 steel towers across the shop area. Condensate returns through a 3-in. line laid parallel to the steam line. The elevated construction was adopted because of the difficulty of laying the pipe underground in this territory. The remainder of the pipe line is underground, enclosed within a concrete conduit.

departure of the train to release the space and place it on sale and to advise the passenger that the ticket may be submitted to the general passenger agent for redemption with an explanation as to why it was not used. In such a case, where there is a refund based on the revenue collected if the space is wholly or partially resold, Mr. Berry thinks the Pullman Company should actually hold itself out in the tariff to resell space canceled after the time limit before it sells any other like accommodations for the same train. He suggests for such a holding-out a rule which would also provide that when a unit of space of the same kind which had not been sold at the time of the cancellation is sold before the released unit, refund will be made to the purchaser of the released space on the basis of the amount received from the sale of the similar accommodations.

Still another rule, also designed to salvage as much as possible for the late canceler, was suggested by Mr. Berry. It would provide that agents at stations on the route of the train be notified that accommodations have been released either before or after the departure of the train, thus affording agents at such stations an opportunity to sell a portion of the canceled accommodations and thereby provide the basis for a partial refund. On this matter, the examiner did not set out a recommended rule, it being his view the framing of such a provision should be left to Pullman.

His closing comment was on evidence indicating that individual railroads may have their own local practices with respect to the making of reservations without requiring favored passengers to purchase Pullman tickets within the established time limits for such purchases. Pullman disclaimed responsibility for such practices, saying that railroad ticket agents do not become agents of Pullman until they actually sell a Pullman ticket.

The disclaimer did not impress the examiner who asserted that "the proper disposition of accommodations in Pullman cars without prejudice, preference, or discrimination is the obligation of the Pullman Company, and it cannot excuse its failure to perform its duty by shifting the blame to the rail carriers." Thus the final recommendation that the commission should find "that any arrangement or contract with the rail carriers that permits the latter to reserve accommodations in Pullman cars without the purchase of a Pullman ticket and which results in permitting any person to enjoy or receive greater or other privileges, immunities, or preferences not accorded all passengers who purchase Pullman tickets is unjust, unreasonable, and unduly preferential and prejudicial."

D. & R. G. W. Revamp Plan Again Before Supreme Court

The United States Supreme Court this week agreed to review the tenth circuit court of appeals' recent action staying further proceedings in connection with the Denver & Rio Grande Western reorganization plan until it hears argument on the debtor company's appeal from the refusal of the federal district court at Denver, Colo., to remand the plan to the Interstate Commerce Commission for modification in the light of changed conditions since the plan was framed. The Supreme Court set January 6, 1947, as the date for argument in the case.

It has previously passed on the D. & R. G. W. reorganization plan in a June 10, 1946, decision wherein it reversed the same circuit court now involved again to uphold the district court's ruling that holders of the road's general mortgage bonds were "not reasonably justified" in rejecting the reorganization plan as approved by the I. C. C. (see *Railway Age* of June 15, page 1193, and November 2, page 741). It was after this adverse ruling in the junior bondholders, case that the debtor itself launched that phase of the litigation which is now before the Supreme Court on appeal of senior bondholders and the reorganization committee.

In agreeing to review the circuit court's action, the Supreme Court denied the appellants' alternative motion for leave to file a petition for a writ of mandamus directing the circuit court to vacate the stay order.

Emergency Board Reports on Short Lines Wage Dispute

The White House this week made public a statement setting forth the findings of the emergency board which President Truman appointed on October 25 to investigate disputes between various short-line railroads and their employees as represented by the 15 non-operating unions. The disputes involve the employees' demands for application to them of the 18½ cents per hour wage increase granted to railroad employees generally last spring.

The board recommended that the full increase of 18½ cents per hour retroactive as to 16 cents thereof to January 1, and as to 2½ cents to May 22, be put into effect on the following roads for all employees involved in the disputes: Atlanta & St. Andrews Bay; Atlantic & East Carolina; Barre & Chelsea; Belfast & Moosehead Lake; East Tennessee & Western North Carolina; Lackawanna & Wyoming Valley; Midland Terminal; Port Utilities Commission; St. Johnsbury & Lake Champlain; Quanah, Acme & Pacific; and Toledo, Peoria & Western.

As to the Berlin Mills Railway, the board recommended that so much of the 18½ cents increase be put into effect currently and retroactively as will bring the wage rate of the maintenance of way employees up to the highest rate paid to such employees by Class I roads operatng in the same territory. As to the Columbus & Greenville, the board recommended the same increases it would award to employees of roads in the above group, except that the shopmen's increases would be retroactive only to the dates notices of a request for a change in wages were served. A like limit on the retroactive adjustment is recommended with respect to clerks on the Macon, Dublin & Savannah.

With respect to another group of roads, the board recommended that the disputes be returned to the properties "for conference and bargaining." Roads in this group are: Georgia & Florida; Missouri & Arkansas; Rapid City, Black Hills & Western; Rio Grande Southern; Rutland; and Wichita Falls & Southern.

In a separate report the same emergency board recommended that the Barre & Chelsea and the St. Johnsbury & Lake Champlain meet the demands of transportation employees, represented by the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, and the Brotherhood of Railroad Trainmen, by the payment retroactively of 18½ cents per hour increase, to be effective as follows: at the rate of 16 cents per hour from and including January 1, to May 22, and at the rate of 18½ cents per hour from and including May 22, to November 14. The carriers and organizations involved in this dispute had already agreed to increases of 18½ cents per hour and the only issues involved were retrocative payments.

Members of the board were Chairman James H. Wolfe, justice of the Supreme Court of Utah; Robert E. Stone, professor of business law, Syracuse University; and Floyd McGown, attorney of Texas.

Systematic material handling is paying big dividends on American railroads by reducing storage costs and permitting greater utilization of storehouse space

Water Carrier Accounts

The Interstate Commerce Commission's uniform system of accounts for carriers on inland and coastal waterways has been revised in the light of the fact that the carriers have become subject to an accounting system prescribed by the United States Maritime Commission last month. The I. C. C. revision order becomes effective January 1, and meanwhile the commission has canceled as of January 1 its December 11, 1941, order which prescribed the system being superseded.

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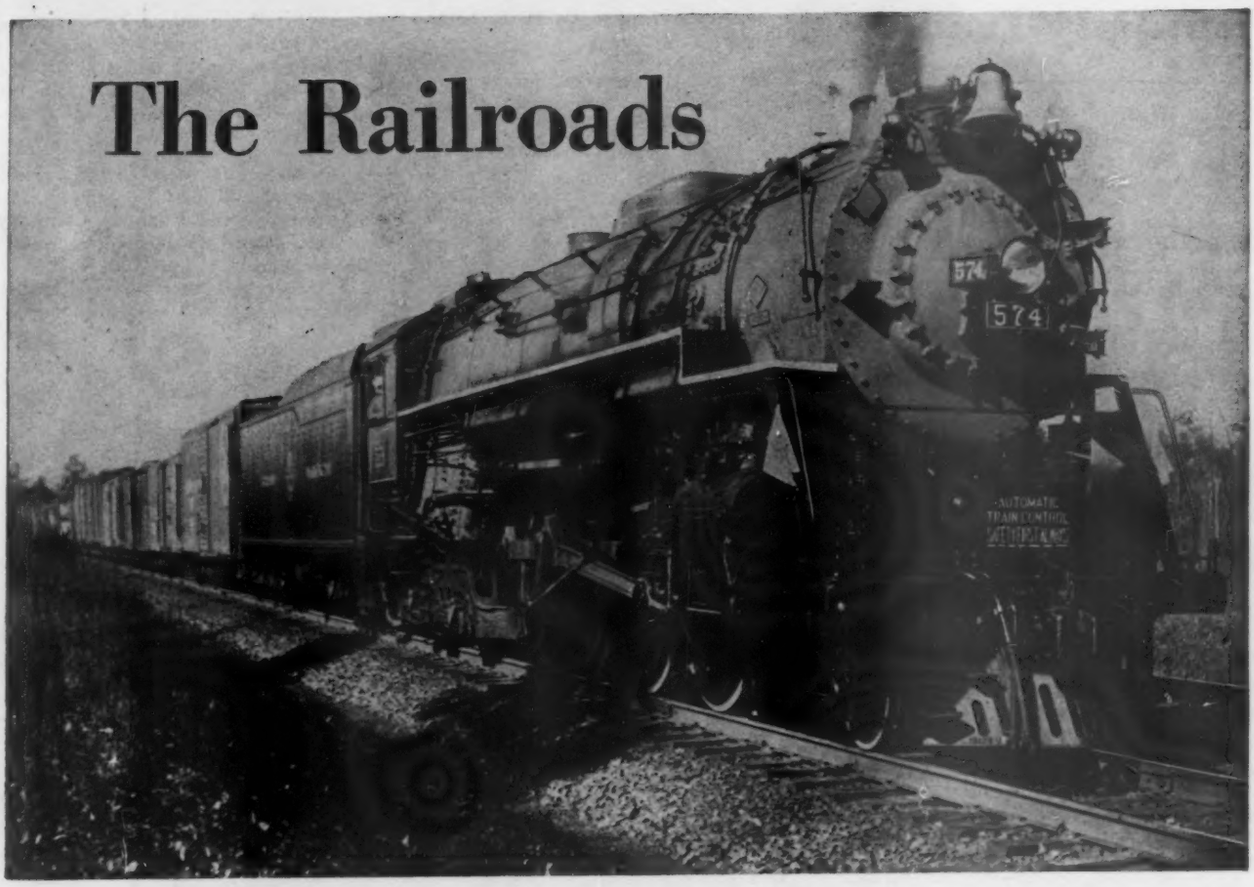

must always look far ahead

Traffic demands must be anticipated for long periods in advance because equipment cannot be built "overnight". So versatile motive power is especially important — locomotives capable of speeding passenger traffic or handling heavy freights with equal facility and economy of operation.

Lima-built modern steam locomotives meet these requirements, and provide the superior performance that results from Lima's insistence upon the highest standards of design, workmanship and materials.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

Supply Trade

The **Hilliard Corporation,** Elmira, N. Y., has announced the appointment of **S. L. Powers,** 606 Williamson building, Cleveland, Ohio, as its representative in that area.

Ray E. Valentine, former sales agent at the St. Louis, Mo., railway sales office of the **National Malleable & Steel Cast-**

Ray E. Valentine

ings Co., has been appointed assistant district sales manager at that office. Mr. Valentine has been associated with National Malleable since 1913. During World War II, he was chief of the malleable iron section, forgings and castings branch, of the War Production Board and returned to the company in 1945 as its St. Louis railway sales agent.

John R. Kingman has been appointed sales agent to succeed Mr. Valentine. Mr. Kingman joined National Malleable's engineering department at Cleveland, Ohio,

John R. Kingman

in 1945, after five years' service in the United States Army. He later was transferred to the St. Louis office as field engineer.

The **Link-Belt Company,** Chicago, has announced the opening of a sales office at 808 North Third street, Milwaukee 3, Wis. **William M. Hufnagel,** district sales manager, has been placed in charge of the new office, and will be assisted by **H. B. Johnson** and **F. E. Sweeney.**

Frederick J. Lindauer, formerly assistant manager, has been appointed manager of **Fairbanks, Morse & Co.'s** Washington, D. C., office, to succeed the late **Robert E. Post.**

Mr. Lindauer joined Fairbanks, Morse in 1923 at the Three Rivers, Mich., plant. In 1925 he was appointed sales and application engineer, with headquarters at Baltimore, Md., and from 1926 to 1931 served as inspection engineer under the director of engineering for the company's factories in Beloit, Wis., Three Rivers and Indianapolis, Ind. He later spent several years in the Chicago office and in 1933 was appointed sales engineer for the New York branch,

Frederick J. Lindauer

serving in that capacity until his transfer to the Washington office in 1935.

Carl L. Zak, assistant sales manager since April, 1945, has been appointed general manager of sales for the **Pittsburgh Steel Company.** The company also has announced the following personnel changes, effective January 1, 1947: **L. A. Ver Bryck** has been appointed assistant general manager of sales and **Joseph G. Smith,** district sales manager at Pittsburgh, Pa., has been appointed manager of sales

Carl L. Zak

for the New York district, to succeed Mr. Ver Bryck. **Walter D. Schlundt,** former district sales manager at Detroit, Mich., will succeed Mr. Smith at Pittsburgh and **Edward L. Dull,** formerly at the Chicago office, has been appointed Detroit district sales manager. **Robert W. Mullin** has been appointed assistant district sales manager in the home office at Pittsburgh.

J. D. Seiler, formerly general superintendent of the Milton, Pa., plant of the **American Car and Foundry Company,** has been appointed assistant works manager at the same plant.

Mr. Seiler was born and educated in Brooklyn, N. Y., and studied engineering

J. D. Seiler

at the Pratt Institute. He joined the New York engineering department of American Car and Foundry in 1907 and subsequently served in the mechanical engineering department at Berwick, Pa., and in the export inspection department. In 1916, he was appointed chief inspector at the Milton plant and served in that capacity until 1926, when he was appointed general superintendent.

H. E. Chilcoat has been elected vice-president in charge of domestic industrial and railway sales for the **Pressed Steel**

H. E. Chilcoat

Car Company, Inc. Mr. Chilcoat, after serving as a machinist in an apprentice course with the Pennsylvania, was with the Westinghouse Air Brake Company from 1906 to 1918, when he joined the Clark Car Company. From 1926 to 1928 he engaged in special consulting work and in the latter year he was appointed **sales man-**

News Department continued on next left-hand page

Serving Harrisburg, Pittsburgh, Chicago, and St. Louis..

THESE ARE THE TRAINS HANDLED BY LOCOMOTIVES EQUIPPED WITH THE

Franklin System of Steam Distribution

The Broadway Limited
The General
The Admiral
Manhattan Limited
Liberty Limited
The Trail Blazer
The Pennsylvanian
The Rainbow
Pennsylvania Limited
Gotham Limited
Spirit of St. Louis
The American
The New Yorker
The Metropolitan
The Jeffersonian
The St. Louisan
The Golden Triangle
The Clevelander
Cincinnati Limited
The Red Arrow
The Steel King
The Pittsburgher
The Sunshine Special
The Golden Arrow
The Duquesne
The Akronite
The Statesman
The Juniata

The 52 locomotives, Pennsylvania Class T1, are of the type that developed 6552 indicated horsepower on test; that achieved a water rate of 13.6 pounds at 76 mph, 20-per-cent cutoff; that produced nearly maximum power at 15-per-cent cutoff. They have consistently shown capacity to maintain speeds of 100 miles per hour, with trains of 14 and 16 cars, on test runs. In no small measure, the Franklin System of Steam Distribution has played a part in achieving these results.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

ager for the air dump car division of the Koppel Industrial Car & Equipment Co. In 1931, he was appointed general manager of sales of Pressed Steel Car's industrial division. In April, 1946, Mr. Chilcoat was elected vice-president in charge of production, which position he held until his recent election.

Francis J. Wakem has been appointed vice-president of the **Johns-Manville Sales Corporation.** Mr. Wakem also will continue as merchandise manager of the industrial products division.

Carl G. Howard, 307 North Michigan avenue, Chicago, has been appointed representative for the **Transport Products Corporation,** in the Chicago, Milwaukee, Wis., and Minneapolis, Minn.-St. Paul areas.

OBITUARY

Edwin Strassburger, St. Louis, Mo., representative for the Buffalo Brake Beam Company, whose death was reported in the *Railway Age* for November 16, page 853, was born in St. Louis on September 20, 1869. He attended the public schools of that city and the Washington University Manual Training School. Mr. Strassburger began his career with the Bank of Commerce in St. Louis, where he later joined the United Railways. In 1903, he became associated with the Damascus Brake Beam Company and three years later joined Buffalo Brake Beam.

Equipment and Supplies

LOCOMOTIVES

The UNION PACIFIC has ordered 29 1,000-hp. Diesel-electric switching locomotives, to cost nearly $3,000,000, of which 25 will be built by the Electro-Motive Division of General Motors Corporation and four by Fairbanks, Morse & Co. Deliveries are scheduled for the first quarter of 1947.

The TURKISH STATE RAILWAYS have ordered 62 steam locomotives from the Vulcan Iron Works, costing over $7,000,000. Although the wheel arrangements of the locomotives have not been disclosed, the Turkish Information Bureau in Washington, D. C., announced some time ago that inquiries were being made for 40 standard-gage locomotives of the 2-10-0 type and 20 of the 2-12-0 type.

SIGNALING

The CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS (part of the New York Central) has placed orders with the Union Switch & Signal Co. for three Model-31 electro-pneumatic car retarders involving 18 cylinder double-rail units, and totaling 337 ft. of retardation, for installation in the westbound Sharonville classification yard, Cincinnati, Ohio.

Financial

CENTRAL OF NEW JERSEY.—*Sells Warehouse.*—This road has sold a six-story warehouse at Newark, N.J., to Seeman Brothers, Inc., for $825,000.

CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $1,020,000 of equipment trust certificates, the proceeds of which will be applied toward the payment of $1,397,400 for equipment which the applicant intends to acquire. The equipment includes five lightweight sleeping cars, at an estimated unit cost of $116,000, to be built by the Pullman-Standard Car Manufacturing Co. and four 2,000-hp. Diesel-electric passenger locomotives, at an estimated unit cost of $204,350, to be built by Fairbanks, Morse & Co. The certificates will be dated February 1, 1947, and will be sold on the basis of competitive bidding.

DELAWARE, LACKAWANNA & WESTERN.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $4,000,000 of Series E 2⅛ per cent equipment trust certificates, the proceeds of which will be applied to the purchase of equipment estimated to cost $5,025,000, as reported in *Railway Age* of November 30, page 940. The certificates will be dated December 15 and will mature in 20 equal semiannual installments ending December 15, 1956. The report also approves a selling price of 99.435, the bid of **Halsey, Stuart &** Company, on which basis the average annual cost will be approximately 2.23 per cent.

GEORGIA.—*Promissory Note.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue at par a promissory note for not exceeding $900,000 to evidence a loan of a like amount from the Fulton National Bank of Atlanta, Ga. Proceeds will be applied toward the retirement of $944,000 of 4 per cent debentures, due January 1, 1947. The note will bear interest, payable quarterly, at 1.75 per cent, increasing yearly to 2.15 per cent in 1951. It will be payable in four annual installments of $40,000, beginning January 1, 1948, and ending January 1, 1951, with the balance of $740,000 payable October 1, 1951.

KANSAS CITY SOUTHERN-TEXAS & NEW ORLEANS.—*Acquisition.*—Division 4 of the Interstate Commerce Commission has authorized these roads to acquire for $250,000 from the Reconstruction Finance Corporation and operate a 4.83-mile industrial lead track which extends from a connection with trackage operated by the applicants in the Lake Charles, La., switching district to three large industries. The acquisition also includes approximately 1.47 miles of interchange, switching and storage tracks in Calcasieu Parish, La. The track was constructed in 1942 by the Defense Plants Corporation to serve war industries. In approving this transaction, the commission denied the intervening Missouri Pacific's request for a condition stipulating that industries located on the line involved would be placed within the Lake Charles switching district and that there be continued switching arrangements under which the M. P. has had the right to serve such industries.

LEHIGH VALLEY.—*Tax Suit Settled.*—A dispute between the Lehigh Valley and the city of Buffalo, N. Y., over the assessment of lands owned by the road has been settled by an agreement under which (1) the road will discontinue court action to recover $2,700,000 in property taxes paid during the last 14 years; (2) the city will refund $275,000 to the road; (3) the city will receive 300 acres of underwater land along Fuhrmann boulevard and other small strips; and the city will purchase 150 acres of land above water east of the boulevard.

NEW YORK CENTRAL.—*Equipment Trust Certificates.*—This road has sold $20,000,000 of equipment trust certificates to Halsey, Stuart & Co. and associates, on their bid of 99.307 for a 2 per cent coupon, involving a net interest cost to the road of 2.13628 per cent. The certificates, designed to finance up to 75 per cent of the price of certain new equipment (see the *Railway Age* for December 7, page 979), were reoffered to the public, subject to Interstate Commerce Commission approval, at prices which will yield from 1.20 per cent for those maturing on January 1, 1948 to 2.25 per cent for those maturing on January 1, 1957.

NEW YORK, ONTARIO & WESTERN.—*Equipment Trust Certificates.*—Acting upon the request of the applicant, resulting from delays in the delivery of equipment, Division 4 of the Interstate Commerce Commission has modified its report and order of October 14 in the Finance Docket No. 15414 proceeding in which it authorized this road to assume liability for $2,600,000 of equipment trust certificates. (See *Railway Age* of October 19, page 663.) Under the terms of the modified order, the definitive certificates will be dated January 1, 1947, and will mature in quarterly installments, payable serially to and including January 1, 1957, with dividends at the rate of 3 per cent yearly.

PIEDMONT & NORTHERN.—*Extra Dividend.*—This road has declared an extra dividend of $1 a share on the common stock, payable on January 20, 1947, to stockholders of record on January 6.

SOUTHERN. — *Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $7,600,000 of Series MM equipment trust certificates, the proceeds of which will be applied toward the estimated payment of $9,500,000 for equipment which the applicant intends to acquire, as reported in *Railway Age*, December 7, page 980. The certificates will be dated December 15, and mature in 20 equal semiannual installments starting June 15, 1947. The report also approves a selling price of 99.04, with a dividend rate of 1¾ per cent, the bid of Blair & Company, on which basis

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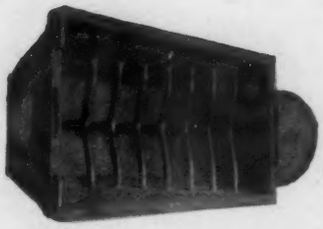

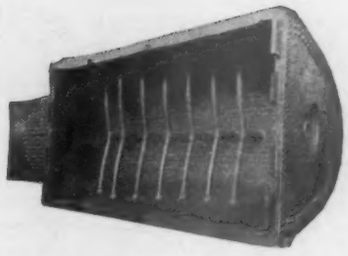

FOR EVERY TYPE OF LOCOMOTIVE BOILER

SECURITY CIRCULATORS are designed for use in any type of steam locomotive, whether coal or oil burning. Installations range from three to nine Circulators each, according to the size of the boiler.

In addition to providing effective support for a 100% brick arch, Security Circulators are so located that they become the most effective evaporating elements in the boiler. They also improve the circulation of water in the side water-legs and over the crown sheet, and lessen honey-combing, flue plugging and cinder cutting.

AMERICAN ARCH COMPANY, INC.

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

the average annual cost will be approximately 1.95 per cent.

PITTSBURG, SHAWMUT & NORTHERN.—*R. F. C. Loan.*—Acting upon the request of this road's trustees, the Interstate Commerce Commission has dismissed the application, which they filed April 9 in their former roles of receivers, for approval of a $200,000 loan from the Reconstruction Finance Corporation. The shift from receivership to a proceeding under section 77 of the Bankruptcy Act came after the loan application was filed; and the commission now has before it Examiner J. S. Prichard's proposed report recommending approval of the trustees' application for authority to abandon the entire line (see *Railway Age* of November 23, page 905).

WACO, BEAUMONT, TRINITY & SABINE.—*Receiver's Notes.*—Division 4 of the Interstate Commerce Commission has further modified its order of February 2, 1931, in the Finance Docket No. 9594 proceeding to authorize T. L. Epperson, receiver of this road, to issue and to renew from time to time, the last maturity to be not later than April 25, 1947, 6 per cent receiver's notes in a total face amount of not exceeding $12,733.

Average Prices Stocks and Bonds

	Dec. 17	Last week	Last year
Average price of 20 representative railway stocks..	51.88	52.61	61.89
Average price of 20 representative railway bonds..	91.31	91.59	100.70

Dividends Declared

Camden & Burlington County.—75¢, semi-annually, payable January 2 to holders of record December 14.

Canada Southern.—$1.50, semi-annually, payable February 1 to holders of record December 26.

Chicago & North Western.—$1.00, payable December 31 to holders of record December 23.

Chicago, Milwaukee, St. Paul & Pacific.—Preferred A (year-end), $5.00, payable January 10 to holders of record December 23.

Delaware.—$1.00, semi-annually, payable January 2 to holders of record December 14.

Detroit, Hillsdale & South Western.—$2.00, semi-annually, payable January 6 to holders of record December 20.

Illinois Terminal.—18¢, payable February 1 to holders of record January 8.

Lykens Valley.—40¢, semi-annually, payable January 2 to holders of record December 14.

Mahoning Coal.—5% preferred, $1.25, semi-annually, payable January 2 to holders of record December 23; common, $6.25, payable December 30 to holders of record December 23.

Northern Central.—$2.00, semi-annually, payable January 15 to holders of record December 31.

Norwich & Worcester.—8% preferred, $2.00, quarterly, payable January 2 to holders of record December 16.

Oahu.—30¢, payable December 12 to holders of record December 5.

Philadelphia & Trenton.—$2.50, quarterly, payable January 10 to holders of record December 31.

Pittsfield & North Adams Corp.—$2.50, semi-annually, payable January 2 to holders of record December 20.

Providence & Worcester.—$2.50, quarterly, payable December 31 to holders of record December 16.

Stony Brook.—$2.50, payable January 5 to holders of record December 31.

Western New York & Pennsylvania.—5% preferred, $1.25, semi-annually; common, $1.50, semi-annually, both payable January 2 to holders of record December 31.

Wheeling & Lake Erie.—75¢, quarterly, payable December 28 to holders of record December 23.

Construction

CHESAPEAKE & OHIO.—This road has awarded the following contracts, the estimated costs of which are shown in parentheses: To Haley, Chisholm & Morris, Charlottesville, Va., for interchanging track at Glasgow, Va. ($20.825), for line changes at Craigsville ($191,400), Griffith ($392,800), Longdale ($179,500), and from North Mountain to Augusta Springs ($824,300), all in Virginia; to the Forbes Construction Company, Hungtington, W. Va., for the grading and masonry work involved in the construction of a spur track to serve a mine development at Emmett, W. Va., and to the Sutton Company, Inc., Radford, Va., for laying the track for the new spur ($237,265); and to the Hughes-Foulkrod Company, Philadelphia, Pa., for extending a shop building at Russell, Ky. ($465,000), which is a portion of the authorized $834,000 project at Russell reported in the *Railway Age* for September 28, page 541.

The following projects, to be undertaken by the road's own forces, have been authorized at probable costs shown in parentheses: Replacing pedestals, bents 151 to 158, on a viaduct at Richmond, Va. ($119,000) and replacing the east pier of bridge 5011 at Guyandot, W. Va. ($67,000). Bids will be asked on the following projects, all of which have been authorized and the probable costs of which are shown in parentheses: Building a bridge and laying a spur track over the Guyandot river to serve a mine development at Wilber, W. Va. ($347,000); subdrainage for a roadbed at St. Albans, W. Va. ($71,400); construction of a 1-story brick tower ($46,500) for an electric interlocking plant at LaCrosse, Ind.; construction of a central heating plant at Gladstone, Va. ($38,500); construction of a yard office building and toilet, wash and locker rooms at Walbridge, Ohio ($32,000) and installing drainage and raising the approach to a grade crossing at Vanceburg, Ky. ($21,250).

SOUTHERN.—This road has authorized the following projects, the probable costs of which are shown in parentheses: A new steel coaling station at Cordele, Ga. ($32,540) and filling a trestle at Frisco, Va. ($25,000).

Abandonments

ARANSAS HARBOR TERMINAL.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon its entire 6.5-mile line from Aransas Pass, Texas, to Harbor Island.

DELAWARE, LACKAWANNA & WESTERN.—The Interstate Commerce Commission has set 11:59 p. m. December 31 as the effective date of the certificate of public convenience and necessity issued October 10 to permit this road and the Hoboken Ferry Company, respectively, to abandon operation of and abandon the ferry line between Hoboken, N. J., and West 23rd street, New York. As noted in the *Railway Age* of November 23, page 905, the commission had previously postponed the certificate's effective date pending its action on petitions for reconsideration, which the present order denies.

CENTRAL OF NEW JERSEY.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon that portion of its so-called Hibernia Mine branch, extending approximately 3.1 miles from a point near Rockaway, N. J., to the end of the line at Hibernia. No traffic has moved over the line since 1940.

PITTSBURGH & LAKE ERIE.—This road and its lessor, the Pittsburgh, MsKeesport & Youghiogheny, have jointly applied to the Interstate Commerce Commission for authority to abandon, including operation thereof by the P. & L. E., a 5.7-mile branch from Fayette City, Pa., to Perryopolis Junction.

WESTERN MARYLAND.—Abandonment of operation by the Western Maryland and abandonment by the Somerset Coal Railway, its wholly-owned subsidiary, of approximately 4 miles of track in Somerset county, Pa., has been authorized by Division 4 of the Interstate Commerce Commission. The track, a portion of the applicant's so-called Ankeney branch, was used to serve coal mines which are now depleted.

Railway Officers

EXECUTIVE

J. Curtis Platt has been elected president of the Mississippi Central. Mr. Platt's name was erroneously listed as John C. Platt in the *Railway Age* of December 7.

I. B. Tigrett, president of the Gulf, Mobile & Ohio, with headquarters at Mobile, Ala., also has been named chief executive officer of the Alton. He succeeds **Armstrong Chinn,** whose election as president of the Terminal Railroad Association of St. Louis was reported in the *Railway Age* of December 14.

Arthur S. Genet, assistant vice president in charge of freight traffic of the Chesapeake & Ohio and the Pere Marquette, with headquarters at Cleveland, Ohio, has been promoted to vice-president in charge of traffic of those roads, succeeding **William C. Hull,** who is retiring after nearly a half century with the Chesapeake & Ohio. A photograph of Mr. Genet and a sketch of his railway career appeared in the *Railway Age* of July 6, page 31, in connection with his appointment as assistant vice-president in charge of freight traffic. **E. M. Whanger,** assistant vice-president and assistant to the president of the Pere Marquette, with headquarters at Detroit, Mich., has also been appointed to those positions on the Chesapeake & Ohio, with headquarters at Cleveland. **Leonard B. Allen,** vice-president of the Chesapeake & Ohio

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at Cleveland, is retiring after 47 years of service. **C. S. Lake,** assistant to the president of the Chesapeake & Ohio at Richmond, Va., is retiring after 62 years of railroading. **Walter J. Tuohy,** vice-president of coal development for the Chesapeake & Ohio, has been named to a similar capacity with the Pere Marquette and has been given additional duties as vice-president of coal traffic for both roads. **W. H. Wenneman,** vice-president of the C. & O., the New York, Chicago & St. Louis and the Pere Marquette, with headquarters at Cleveland, has had his jurisdiction expanded to include finance and corporate relations. **C. J. Geyer,** general manager of the C. & O., at Richmond, has been advanced to assistant vice-president, with the same headquarters.

FINANCIAL, LEGAL AND ACCOUNTING

Ralph S. Bird, whose promotion to assistant comptroller of the Delaware, Lackawanna & Western at New York was reported in the *Railway Age* of November 9, entered the service of the Lackawanna on October 25, 1909, as a stenographer in the accounting department. He became secretary to the general auditor on March 1, 1910, subsequently advancing to accountant in February, 1917, and to special accountant in September, 1920. Mr. Bird was appointed supervisor of contracts and insurance in December, 1930, and became assistant to comptroller on July 1, 1938, which position he held until his recent promotion to assistant comptroller.

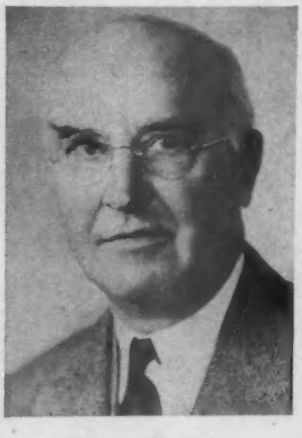
Edward F. Lawson, auditor of freight receipts for the Canadian Pacific, with headquarters at Montreal, Que., will retire on pension on December 31, after 44 years of service with that road. Mr. Lawson was born at St. John, N. B., and joined the Canadian Pacific in 1902 as a clerk in the freight department at West St. John. After holding various clerical positions in the freight offices on both eastern and western lines, he went to Montreal in 1908, where he has since remained. Mr. Lawson was assistant auditor of freight and telegraph receipts from 1937 to 1941 when he was promoted to auditor of freight receipts, the position from which he will retire on December 31. Before joining the Canadian Pacific Mr. Lawson saw active service in the South African War. For a number of years Mr. Lawson lectured at McGill University, Montreal, on freight and station accounting in the transportation engineering course. He also made special studies on the application of punch card machines to freight accounting, and the problems of centralizing this work in various offices.

Sidney S. Alderman, general solicitor of the Southern at Washington, D. C., has been promoted to general counsel of the system, with the same headquarters, succeeding **Sydney R. Prince,** who will retire on January 1, after 45 years of railroad service. Mr. Alderman was born at Greensboro, N. C., on November 28, 1892, and was graduated from Trinity College (now Duke University) in 1913. He attended Trinity College Law School and later studied at the Sorbonne in Paris, France, returning to Greensboro in 1919 to engage in the general practice of law. In 1925 he was appointed assistant division counsel of the Southern at Greensboro and the following year he was promoted to

Sidney S. Alderman

division counsel. He was appointed general solicitor at Washington on January 1, 1930, the position he held at the time of his recent appointment. Mr. Alderman has handled many important litigations for the Southern and for the railroad industry in the United States Supreme Court, in other federal and state courts, and before Presidential emergency boards. In World War I, Mr. Alderman served as captain of Company M, 321st Infantry, 81st Division, and also as operations officer in the Vosges, Verdun and Meuse-Argonne campaigns. He is a member of the American and North Carolina Bar Associations and is a trustee of Duke University. Mr. Alderman recently returned from Nuremberg, Germany, where he participated in the prosecution of top Nazi war criminals as special assistant to the attorney general and assistant to Justice Robert H. Jackson.

Mr. Prince was born at Mount Sterling, Choctaw county, Alabama, on September



Sydney R. Prince

11, 1876, receiving his B. A. degree from the University of Alabama in 1896 and his LL. B. degree from Georgetown University in 1898. Mr. Prince was admitted to the Alabama bar on December 30, 1898, and practiced at Mobile from 1898 to 1900 with his father. He became connected with the law department of the Mobile & Ohio (now Gulf, Mobile & Ohio) in 1901 as personal injury attorney. In 1908 he was appointed assistant general counsel for that road, becoming general counsel in 1911. He remained in the latter position until July 1, 1918, when he was appointed general solicitor of the Southern system and certain other railroads under the United States Railroad Administration, with headquarters at Washington, D. C. With the ending of federal control of the railways in 1920, Mr. Prince became general solicitor of the Southern system. In January, 1932, he was promoted to general counsel, the position from which he will retire on January 1.

W. R. Patterson, assistant comptroller of the Canadian Pacific, with headquarters at Montreal, Que., will retire on pension on December 31 because of ill health. Mr. Patterson was born at Toronto, Ont., on January 3, 1890, and attended Harbord Collegiate Institute, Toronto, and Technical High School, Toronto. He entered railroad service on June 6, 1913, as clerk in the office of the auditor of disbursements of the Canadian Pacific, where he remained until August 1, 1922. He then served successively as chief clerk in that office, assistant auditor of disbursements, auditor of disbursements, and deputy general auditor until February 1, 1932, when he became general auditor. On January 1, 1935, Mr. Patterson was appointed assistant comptroller, in which position he assisted in general supervision over the organization and coordination of the Canadian Pacific's accounting department dealing with revenue and expenditures of its world-wide transportation system. Mr. Patterson also served as comptroller of the Canadian Pacific Air Lines since that company was formed in 1932.

OPERATING

L. W. Fisher has been appointed assistant superintendent of the Ohio Central division of the New York Central, with headquarters at Charleston, W. Va., succeeding **L. S. Emery,** deceased.

C. A. Taylor, general superintendent of the Chesapeake & Ohio, with headquarters at Huntington, W. Va., has been promoted to general manager at Richmond, Va., succeeding **C. J. Geyer,** whose promotion to assistant vice-president at Richmond is noted elsewhere in these columns.

C. W. Jeffries, trainmaster of the Pennsylvania, with headquarters at Indianapolis, Ind., has been transferred to Columbus, Ohio, where he succeeds **Albert L. Hunt,** whose promotion to division superintendent at Logansport, Ind., was reported in the *Railway Age* of November 23. Mr. Jeffries is succeeded at Indianapolis by **H. H. Vaughn,** trainmaster at Toledo, Ohio, who is in turn succeeded by **G. J. McCloskey,** assistant trainmaster, Chicago Terminal division. **L. J. Halleran,** acting assistant trainmaster, Chicago Terminal division, has been promoted to assistant trainmaster of that division.

Walter A. Emerson, whose promotion to superintendent car department of the

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Elgin, Joliet & Eastern, with headquarters at Joliet, Ill., was reported in the *Railway Age* of December 7, was born on October 8, 1881, at Marshalltown, Iowa, and began his railway career there in 1900 in the car department of the Iowa Central (now

Walter A. Emerson

Minneapolis & St. Louis). Mr. Emerson joined the E. J. & E. in 1901, and was promoted to assistant master car builder in 1917. He was further advanced to master car builder in 1927, and to general master car builder in 1938. He held the latter position at the time of his recent appointment.

R. E. Taylor, whose promotion to general superintendent of transportation of the Canadian Pacific system, with headquarters at Montreal, Que., was reported in the *Railway Age* of December 14, was born at Ripley, Ont., on November 12, 1892. Mr. Taylor entered railroad service with the Canadian Pacific in 1912 as an operator and subsequently served until 1934 as dispatcher, chief dispatcher and assistant superintendent, successively, all at London, Ont. In 1934 he became inspector of transportation at Montreal, being transferred in the same capacity to Toronto, Ont., in 1937, where he remained

R. E. Taylor

until 1940. Mr. Taylor served as superintendent of the Bruce, Schreiber and London divisions at Toronto, the Portage division at Winnipeg, Man., and the Medicine Hat Division, successively, from 1940 to 1945. On November 15, 1945, he was promoted to superintendent of transportation of the Eastern lines at Toronto, which position he held until his recent promotion.

R. F. Williams, assistant superintendent of the Southern Pacific, Texas and Louisiana Lines, with headquarters at Ennis, Tex., has been promoted to terminal superintendent at Houston, Tex. He is succeeded by **C. N. Billings,** division engineer at Ennis. **C. T. McKittrick,** trainmaster at Houston, has been promoted to senior assistant terminal superintendent there. **D. R. Kirk, Sr.** has been appointed assistant terminal superintendent at Houston. Succeeding Mr. McKittrick as trainmaster at Houston is **E. P. Evans,** trainmaster at Lafayette, La., who in turn is succeeded by **H. B. Swanzy, Jr.,** traveling engineer at large on the Texas and Louisiana Lines.

TRAFFIC

E. A. Compton has been appointed general southwestern agent of the Illinois Terminal, with headquarters at Dallas, Tex., succeeding **J. P. Anderson,** who has resigned.

T. C. Osborn has been appointed general agent, refrigerator department, of the Atchison, Topeka & Santa Fe at Seattle, Wash., succeeding **Clare A. Mulvihill,** whose promotion to assistant manager, refrigerator department, was reported in the *Railway Age* of November 30. **M. L. Woodward** has been appointed division passenger agent at Kansas City, Mo., succeeding **C. L. Rich,** who has been transferred to Dallas, Tex.

R. W. Hart, whose promotion to general freight agent of the New York Central system at Cleveland, Ohio, was reported in the *Railway Age* of November 30, was born at Cuyahoga Falls, Ohio, on June 12, 1889. Mr. Hart entered railroad service on June 1, 1906, as messenger on the Lake Shore & Michigan Southern (now New York Central) at Cleveland, becoming rate clerk there in 1908 and chief clerk to division freight agent there in 1924. He was appointed chief clerk to general freight agent at Cleveland in 1926, being transferred to Chicago in the same capacity in 1927. Mr. Hart became chief clerk to freight traffic manager at Chicago on April 1, 1928, transferring to Cleveland in the same capacity on June 1, 1935. He became assistant general freight agent at Cleveland on April 15, 1943, which position he held until his recent promotion to general freight agent.

ENGINEERING & SIGNALING

Alan K. Frost, assistant engineer, maintenance of way of the Erie, with headquarters at Cleveland, Ohio, has been promoted to assistant to the chief engineer maintenance of way, with the same headquarters, succeeding **W. H. Brameld,** whose retirement was reported in the *Railway Age* of November 9.

J. E. Weatherly, assistant division engineer of the Southern Pacific, Texas and Louisiana Lines, at Houston, Tex., has been promoted to division engineer there, succeeding **A. P. Reese,** who has been transferred to Ennis, Tex. Mr. Reese succeeds **C. N. Billings,** whose promotion to assistant superintendent, with headquarters at Austin, Tex., and Ennis, is reported elsewhere in these columns.

C. W. Biggers, assistant signal engineer of the Lower Northern district of the Chicago & North Western, with headquarters at Milwaukee, Wis., has been appointed superintendent of construction—centralized traffic control, with headquarters at Chicago. **W. F. Homuth,** district signal foreman at Milwaukee, has been appointed acting assistant signal engineer, Lower Northern district, with the same headquarters.

Howard E. Graham, water service inspector of the Illinois Central, at Chicago, has been promoted to assistant superintendent water service, Southern lines, with the same headquarters, succeeding to the duties of **W. B. Bryant,** who has retired after 45 years of service. **E. R. Schlaf,** supervisor water service, Iowa division—east, at Waterloo, Iowa, has been appointed assistant to superintendent water service, with headquarters at Chicago, succeeding to the duties of Mr. Graham. **J. P. Hanley,** water service inspector, Northern lines, at Chicago, has been promoted to assistant superintendent water service, Northern lines, with the same headquarters.

MECHANICAL

W. S. Whitford, master mechanic of the Chicago & North Western, with headquarters at Boone, Iowa, has retired after 50 years of railroad service.

M. M. Stansbury has been appointed supervisor maintenance of way shop and equipment of the New York, Chicago & St. Louis, with headquarters at Bellevue, Ohio, succeeding **C. G. Mitchell,** deceased.

PURCHASES AND STORES

W. K. Smallridge, material supervisor of the Northern Pacific, with headquarters at St. Paul, Minn., has been appointed assistant general storekeeper, with the same headquarters. He succeeds **C. A. Nichols,** who has retired after 51 years of service. Mr. Smallbridge is succeeded by **A. M. Stebbins. E. L. Cates** has been appointed division storekeeper, with headquarters at Duluth, Minn., and **K. C. Thompson** has been appointed district storekeeper at St. Paul.

OBITUARY

W. H. Koch, assistant general freight agent of the Erie, with headquarters at Detroit, Mich., died in that city on December 9.

Charles E. Ervin, who retired in 1945 as vice-president of the Gulf, Mobile & Ohio, died at St. Luke's hospital, St. Louis, Mo., on December 16.

Harvey F. Hamilton, who retired on December 31, 1940, as assistant to the chief engineer of the Great Northern, with headquarters at St. Paul, Minn., died on December 14.

Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 129 monthly reports of revenues and expenses representing 133 Class I steam railways
(Switching and Terminal Companies Not Included)

FOR THE MONTH OF SEPTEMBER 1946 AND 1945

Item	United States		Eastern District		Southern District		Western District	
	1946	1945	1946	1945	1946	1945	1946	1945
Miles of road operated at close of month	227,695	228,255	55,850	55,999	43,273	43,333	128,572	128,923
Revenues:								
Freight	$515,622,853	$488,318,812	$201,400,226	$177,563,579	$ 98,398,556	$ 85,977,965	$215,824,071	$224,777,268
Passenger	95,361,114	140,145,494	45,628,253	56,147,465	14,655,060	25,469,066	35,077,801	58,528,963
Mail	10,285,680	10,354,852	3,607,181	3,576,272	1,762,069	1,708,517	4,916,430	5,070,063
Express	6,844,721	7,645,692	314,359	1,514,987	960,182	1,103,353	5,570,180	5,027,352
All other operating revenues	32,287,623	32,414,006	14,690,672	13,521,274	3,984,276	4,500,084	13,612,675	14,392,648
Railway operating revenues	660,401,991	678,878,856	265,640,691	252,323,577	119,760,143	118,758,985	275,001,157	307,796,294
Expenses:								
Maintenance of way and structures	96,748,584	129,358,698	38,232,783	39,819,386	18,574,653	20,641,163	39,941,148	68,898,149
Depreciation	10,058,845	9,846,650	4,354,470	4,305,259	1,629,767	1,605,310	4,074,608	3,936,081
Retirements	1,327,391	1,378,698	665,309	329,539	101,791	234,063	560,291	815,096
Deferred maintenance	* 499,337	* 208,775	* 188,049	52,152	* 8,319		* 302,969	* 260,927
Amortization of defense projects	62,905	22,209,031	7,673	724,984	17,522	1,296,283	37,710	20,187,764
Equalization	* 2,099,078	* 1,208,347	* 964,689	* 613,314	* 437,100	81,281	* 697,289	* 676,314
All other	87,897,858	97,341,441	34,358,069	35,020,766	17,270,992	17,424,226	36,268,797	44,896,449
Maintenance of equipment	121,043,910	216,011,889	53,266,695	54,460,591	22,060,968	28,793,224	45,716,247	132,758,074
Depreciation	18,383,028	18,090,930	7,644,283	7,663,492	3,715,312	3,611,815	7,023,433	6,815,623
Retirements	* 30,759	* 4,178	* 1,279	2,848	* 10,355	* 2,650	* 19,125	* 4,376
Deferred maintenance and major repairs	* 262,895	* 246,932	* 1,615	* 1,720	* 80,552		* 180,728	* 245,212
Amortization of defense projects	1,076,675	100,983,053	473,257	6,143,067	156,542	7,254,641	446,876	87,585,345
Equalization	* 372,250	* 27,088	* 46,082	* 4,932	* 279,644	* 30,128	* 46,524	7,972
All other	102,250,111	97,216,104	45,198,131	40,657,836	18,559,665	17,959,546	38,492,315	38,598,722
Traffic	13,533,164	11,829,945	4,933,575	4,186,812	2,604,269	2,217,334	5,995,320	5,425,799
Transportation—Rail line	268,913,410	236,246,133	116,708,234	100,529,886	45,331,642	39,602,557	106,873,534	96,113,690
Transportation—Water line								
Miscellaneous operations	11,228,831	10,311,892	4,046,991	3,770,993	1,341,144	1,558,095	5,840,696	4,982,804
General	18,330,600	17,208,981	7,204,635	7,141,120	3,687,309	3,441,069	7,438,656	6,626,792
Railway operating expenses	529,798,499	620,967,538	224,392,913	209,908,788	93,599,985	96,253,442	211,805,601	314,805,308
Net revenue from railway operations	130,603,492	57,911,318	41,247,778	42,414,789	26,160,158	22,505,543	63,195,556	* 7,009,014
Railway tax accruals	49,530,415	1,784,175	15,923,650	15,177,049	13,228,499	11,653,552	20,378,266	* 25,046,426
Pay-roll taxes	21,217,511	18,514,983	9,059,433	7,615,724	3,790,179	3,227,348	8,367,899	7,671,911
Federal income taxes	5,841,422	* 38,592,282	* 1,943,017	* 1,443,215	5,134,997	3,870,119	2,649,442	* 41,019,186
All other taxes	22,471,482	21,861,474	8,807,234	9,004,540	4,303,323	4,556,085	9,360,925	8,300,849
Railway operating income	81,073,077	56,127,143	25,324,128	27,237,740	12,931,659	10,851,991	42,817,290	18,037,412
Equipment rents—Dr. balance	10,679,689	9,573,668	4,946,295	2,848,585	* 1,463,908	* 1,065,460	7,197,302	7,790,543
Joint facility rent—Dr. balance	3,030,898	3,419,620	1,539,054	1,785,789	377,270	311,864	1,114,574	1,321,967
Net railway operating income	67,362,490	43,133,855	18,838,779	22,603,366	14,018,297	11,605,587	34,505,414	8,924,902
Ratio of expenses to revenues (per cent)	80.2	91.5	84.5	83.2	78.2	81.0	77.0	102.3

FOR NINE MONTHS ENDED WITH SEPTEMBER 1946 AND 1945

Item	United States		Eastern District		Southern District		Western District	
	1946	1945	1946	1945	1946	1945	1946	1945
Miles of road operated at close of month	227,743	228,285	55,911	56,006	43,283	43,333	128,549	128,946
Revenues:								
Freight	$4,202,946,973	$5,172,952,360	$1,609,922,107	$1,898,734,425	$841,822,907	$966,606,136	$1,751,201,959	$2,307,611,799
Passenger	991,597,469	1,263,185,736	449,626,602	518,714,604	160,916,740	239,821,692	381,054,127	504,649,440
Mail	92,926,805	94,173,159	32,936,161	32,017,539	16,027,332	16,370,203	43,963,312	45,785,417
Express	64,857,193	112,962,294	4,041,853	32,103,511	10,258,460	16,057,731	50,556,880	64,801,052
All other operating revenues	269,645,423	283,481,886	124,611,602	123,250,590	35,044,803	39,150,845	109,989,018	121,080,451
Railway operating revenues	†5,621,973,863	†6,926,755,435	2,221,138,325	2,604,820,669	1,064,070,242	1,278,006,607	2,336,765,296	3,043,928,159
Expenses:								
Maintenance of way and structures	865,881,855	989,321,071	316,808,375	349,945,368	175,084,143	174,037,729	373,989,337	465,337,974
Depreciation	90,192,981	87,918,486	39,075,724	38,482,868	14,585,315	14,102,365	36,531,942	35,333,253
Retirements	7,169,010	8,529,712	1,850,066	1,619,149	914,094	1,260,911	4,404,850	5,649,652
Deferred maintenance	* 4,092,449	* 2,677,231	* 993,630	* 646,594	301,325		* 3,400,144	* 2,030,637
Amortization of defense projects	254,743	39,403,400	56,346	5,948,937	101,204	4,303,075	97,193	29,151,388
Equalization	9,477,176	12,353,373	4,171,279	4,229,314	2,883,541	5,602,525	2,422,356	2,521,534
All other	762,880,394	843,793,331	272,648,590	300,311,694	156,298,664	148,768,853	333,933,140	394,712,784
Maintenance of equipment	1,092,278,863	1,317,848,746	465,142,374	501,808,419	200,115,525	239,254,424	427,020,964	576,785,903
Depreciation	165,691,548	161,705,320	69,787,094	68,321,551	33,152,804	32,319,182	62,751,650	61,064,587
Retirements	* 298,123	* 65,523	* 94,687	* 68,000	* 92,382	* 59,729	* 111,054	62,206
Deferred maintenance and major repairs	* 2,655,773	* 1,317,965	* 191,133	* 36,001	* 326,176		* 2,138,464	* 1,281,964
Amortization of defense projects	6,730,634	241,878,922	2,931,428	53,411,861	955,258	41,318,169	2,843,948	147,148,892
Equalization	657,146	101,891	* 35,433	* 22,300	668,679	* 36,822	23,900	161,013
All other	922,153,431	915,546,101	392,745,105	380,201,308	165,757,342	165,713,624	363,650,984	369,631,169
Traffic	123,020,570	106,289,227	45,021,662	38,070,671	23,059,895	20,020,756	54,939,013	48,197,800
Transportation—Rail line	2,362,401,708	2,253,845,530	1,030,229,567	989,818,900	409,774,433	379,841,138	922,397,708	884,185,492
Transportation—Water line								
Miscellaneous operations	96,152,645	89,272,542	36,626,140	32,602,762	12,822,674	13,844,056	46,703,831	42,825,724
General	173,482,204	154,867,625	68,926,162	62,842,210	34,269,038	30,097,870	70,287,004	61,927,545
Railway operating expenses	4,713,217,845	4,911,444,741	1,962,754,280	1,975,088,330	855,125,708	857,095,973	1,895,337,857	2,079,260,438
Net revenue from railway operations	908,756,018	2,015,310,694	258,384,045	629,732,339	208,944,534	420,910,634	441,427,439	964,667,721
Railway tax accruals	430,171,688	1,101,012,822	141,271,904	280,356,408	109,270,920	260,112,433	179,628,864	560,543,981
Pay-roll taxes	189,958,168	174,400,729	79,372,359	72,381,148	34,420,663	30,182,907	76,165,146	71,836,674
Federal income taxes	44,330,804	702,320,990	* 17,033,625	113,113,565	35,909,406	185,357,631	25,455,023	403,849,794
All other taxes	195,882,716	224,291,103	78,933,170	94,861,695	38,940,851	44,571,895	78,008,695	84,857,513
Railway operating income	478,584,330	914,297,872	117,112,141	349,375,931	99,673,614	160,798,201	261,798,575	404,123,740
Equipment rents—Dr. balance	83,952,671	104,699,653	37,292,864	45,627,382	* 3,993,315	* 1,640,958	50,653,122	60,713,229
Joint facility rent—Dr. balance	29,020,618	31,451,497	14,956,297	15,826,861	3,472,405	3,389,366	10,591,916	12,235,270
Net railway operating income	365,611,041	778,146,722	64,862,980	287,921,688	100,194,524	159,049,793	200,553,537	331,175,241
Ratio of expenses to revenues (per cent)	83.8	70.9	88.4	75.8	80.4	67.1	81.1	68.3

* Decrease, deficit, or other reverse item.

† Railway operating revenues are after deduction of $2,499,007 for the nine months ended with September 1946 and $36,149,452 for the nine months ended with September 1945 to create a reserve for land grant deductions in dispute.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

Current Publications

Articles in Periodicals

The Boom, A Second Look. Fortune, December, 1946, *pp.* 113-119, *etc.*

This article discusses the material shortages in such basic industries as steel and lumber as they affect the current economic situation, and then as a test case, applies the effects of these shortages to a particular capital goods industry—the railroad equipment industry.

Books

Transportation Management, by Henry B. Cooley. 183 *pages. Published by Cornell Maritime Press,* 241 *W.* 23*rd st., New York* 11, *N. Y. Price,* $5.00.

The author's purpose is to set forth the principles involved in transportation management. He discusses the principles to be considered in analyzing the existing organization, planning the new organization, instituting changes and checking on the organization to ascertain whether it is functioning properly. The work of various departments is outlined to show the interrelation between departments and the general functions of the departments. It covers air, water and truck transportation companies.

Railroading from the Rear End, by S. Kip Farrington, Jr. 430 pages, illustrations. Published by Coward-McCann, Inc., 2 W. 45th st., New York, N. Y. Price, $5.00.

A book of modern railroading, its practices and operations, told in a style that will interest the general reader. It covers operations from the end of the war to date and its theme revolves around the rear end and the caboose. Chapters cover various phases of railroading as depicted on different railroads, e.g., "Centralized Traffic Control on the Santa Fe", "The Burlington's Panoramic Coach", "The Great Northern's Ore Move" and "Tailoring the Tracks on the New York Central". It is very well-illustrated and indexed.

The L. M. S. at War, by George C. Nash. 88 pages. Illustrations. Published by the London Midland & Scottish Railway, Euston station London, N. W. 1, England. Price, five shillings.

The war activities of the L. M. S. are reviewed in this book. It covers such diverse subjects as the evacuation of school children, air raid precautions, the manufacture of tanks and shells and the repair of airplanes at L. M. S. worshops. The doings of the L. M. S. fleet at Dunkirk and afterwards are described as is the battle at home against bombs, weather and blackout. In addition to numerous black and white photographs there are eight plates in color in the book.

Pamphlet

The Railways of Newfoundland, by Seymour T. R. Abt. Issued by the Office of International Trade, United States Department of Commerce. Available from the Government Printing Office, Washington 25, D. C. Price, five cents.

The Newfoundland Railway is the only common-carrier railroad on the island of Newfoundland. This little pamphlet outlines the economic situation on the island and comments on current railroad operations. A map of the railroad is included.

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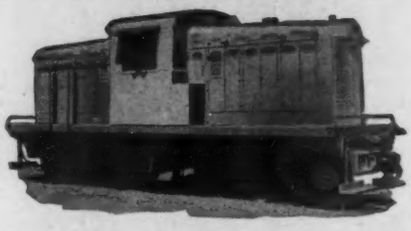

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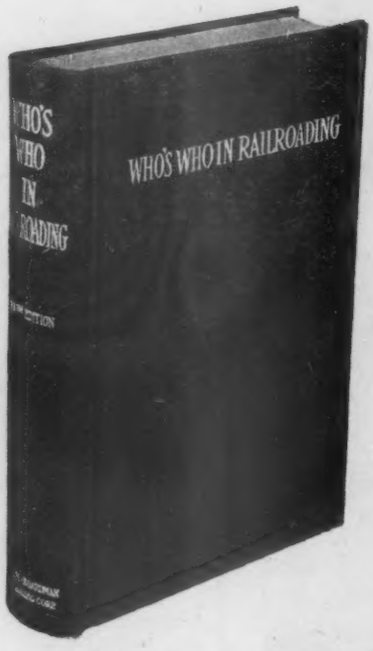

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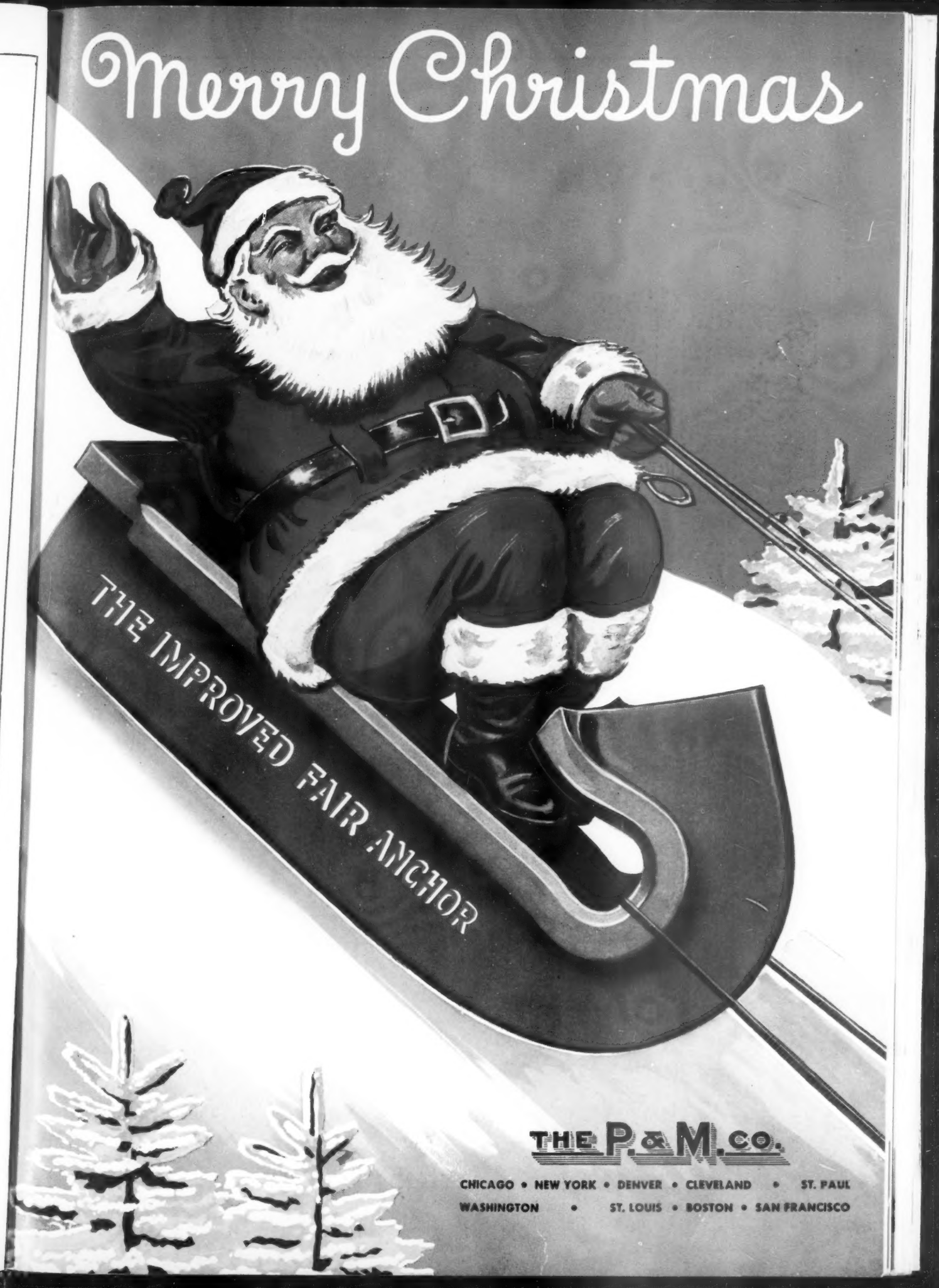
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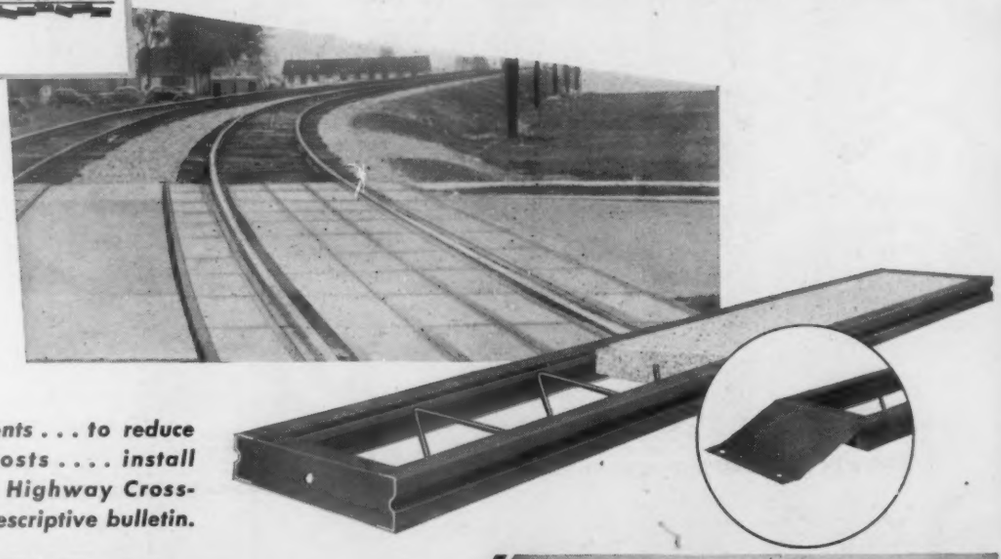

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